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Demand Driven Growth in Small Open and Import Dependable Economy

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Demand driven growth is rather a common approach in many countries in the short run. Growth in aggregate demand pushes production to higher level, increasing employment and income. But what is the case in small open economies, which are highly import dependable, service-oriented, and have to import most consumers' goods? Research is focused on the case of small open economy (Montenegro). Research will be based on statistical data for Montenegro, for period from 2000 to 2011. Data are processed in Eviews, using Least Square method to estimate equations and models. Research has shown that gross domestic product (GDP) growth in the short run, prior to global financial crisis, was achieved through growth in consumption and investment, which led to growth in import and growth in foreign debt, as consumption was financed significantly borrowing foreign financial resources. After the crisis, financial inflows dropped, leaving Montenegrin economy to struggle with increased debt (both public and private), unfinished investment project to provide value added and low level of domestic production leading to even higher trade deficit. Future growth can be achieved only if it is driven by investments, as growth in consumption will more likely lead to higher trade deficit than production growth.

Keywords: aggregate demand, growth, consumption, investments, import dependency, production

Introduction

Among many discussions in macroeconomics, there is one majorly accepted consensus: In the long run, country's income (GDP) depends on the factors of production (capital, labor, and technology). GDP grows when the factors of production increase or when technology improves resulting in higher productivity. As Mankiw (2010) said, this is an important issue that policy-makers should incorporate into their policies. Any policy resulting in an increase of national saving, efficiency of labor, and improvement of national institutions, will lead to higher GDP in the long run with greater probability.

In the short run, GDP depends on aggregate demand for goods and services (household consumption, government consumption, investment and trade balance-export minus import) due to nominal price stickiness that enables value to differ for significant period of times. Any increase in any particular component of aggregate demand will lead to GDP growth in the short run). Policy-makers, ever since Keynes introduced such idea, see government expenditures as a good tool to stabilize economy and provide positive growth rates. Increase in government expenditures may encourage investment (through public investment) and/or personal consumption (through higher transfers or wages) and push production to a higher level. Whether it is a good

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approach or not, is not aimed to discuss in this paper. What could be a problem is the failure of growing demand to increase domestic production and employment and provide stable path for future growth.

Over the last two decades, most central and south-eastern European countries have experimented with unique growth model, combining institutional anchoring to the European Union (EU), integration of product markets through trade in goods and services, encouraged capital market mobility and eventually labor mobility. In Becker et al. (2010) study, they concluded that, while most countries followed similar growth model, results were quite different, with imbalances, especially external deficit and the credit boom, much more serious in Balkan and Baltic countries than in central Europe.

In analysis on prospects for development in south-east Europe, Astrov and Gligorov (2001) emphasized that current accounts are almost invariably and persistently in red, which makes financial inflows necessary.

In more recent study by Astrov et al. (2010), it stated that growth model in South East Europe (SEE) should be redirected, in terms that changed external conditions after crisis and internal behavior responses to the crisis (more difficult financing conditions, increasing savings rates of household sector, constraint in fiscal spending) will shape the growth paths.

Economic Performance in Montenegro Since Independence

Montenegro has gained independence in 2006, and since then it has started creating economic environments favorable for investment. It is small, open economy, with stable monetary system due to Eurization (introduced DM as sole official currency since 2000, following with Euro).

Economy has been service-oriented for last decades, with manufacturing and agriculture making on average 20% of GDP. The most significant service sectors are trade, transportation, and tourism.

Since 2006, strategic vision of Montenegrin development has been to, through investment growth, provide output growth and stable positive growth rates. Due to low national savings, foreign capital has been seen as key financial source to finance investment. Foreign direct investments were important not only because they will provide necessary capital, but also new technologies, know-how, and management systems. Therefore, financial market has been open to foreign investors since, for any type of financial flows, including borrowing from abroad to finance all types of spending (consumption or investment).

Since 2006, most variables have started growing rather fast, for example, GDP, investment, and personal consumption. In 2009, growth was interrupted due to negative effects from international markets, but has started again in 2010, although modestly (see Figure 1).

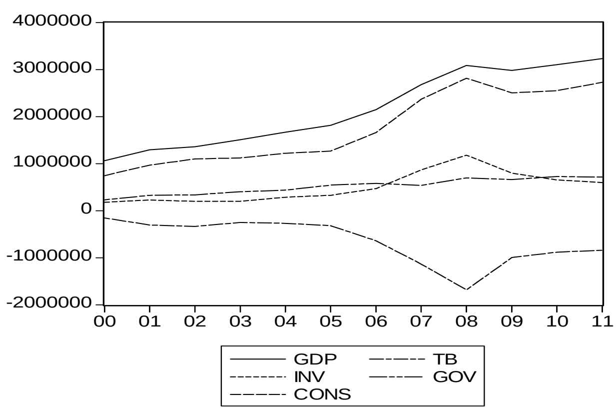

Figure 1. Trends in GDP and aggregate demand components in Montenegro (2000-2011).

But the biggest issue is that growth rates are dominantly driven by household and government consumption, while investment failed to increase material production significantly which resulted in high trade deficit.

In production, progress was seen in electricity generation and in service area in hotels and restaurants, while services, as trade and transportation, generated growth significantly as well (see Figure 2).

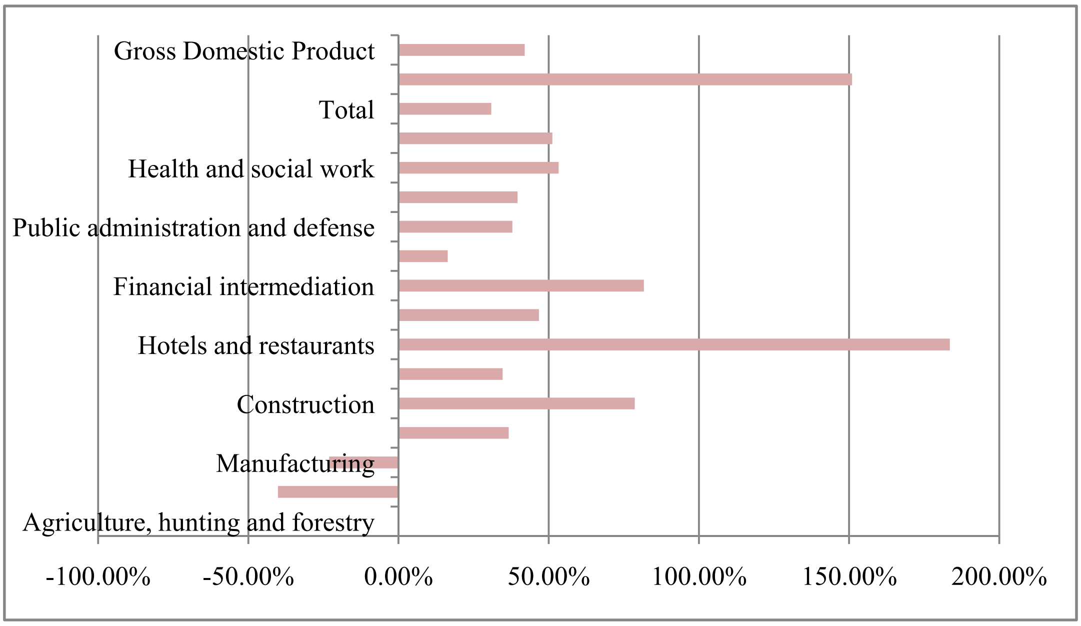

Figure 2. Real growth by economic activities, 2011/2000. Source: Based on data from Monstat (Statistical Agency of Montenegro) (Retrieved from http://www.monstat.org).

Analyzing real output growth by economic activities, three of them declined in 12-year period: manufacturing, mining, and agriculture. Those three are the most important sectors in terms of domestic production of goods. What influenced overall real GDP growth in Montenegro was real growth in tourism (hotels and restaurants), trade, financial intermediation, and transport. Construction was also an important component.

Data

Analyzing economic performance in Montenegro is limited with short existence of data time series (data used in this paper are presented in Table 1), as it is a young country (independent since 2006), with statistics produced in accordance with National Accounts System 2003 Standards since 2000. Also, additional obstacle is that most time series were produced on yearly basis, which limits number of observation (see Table 1).

Table 1

Macroeconomic Indicators for Montenegro (in 000 Euro)

Year	GDP	Gov.cons	Foreign transfers	Gross inv.	Private loans	Net investment	Net factor income	Household consumption	Trade balance	Tax revenues
2000	1,065,699	233,759	NA	179,821	NA	134,433	NA	745,691	-152,344	NA
2001	1,295,110	325,988	NA	226,683	NA	181,483	NA	970,764	-305,160	NA
2002	1,360,353	338,195	NA	198,916	NA	134,847	NA	1,100,461	-333,520	NA
2003	1,510,128	404,181	NA	200,830	49,959	158,313	NA	1,120,474	-247,297	NA

(Table 1 continued)

Year	GDP	Gov.cons	Foreign transfers	Gross inv.	Private loans	Net investment	Net factor income	Household consumption	Trade balance	Tax revenues
2004	1,669,783	439,238	NA	286,072	74,393	224,722	NA	1,221,101	-268,260	NA
2005	1,814,994	543,420	42,000	326,329	104,316	280,278	146,555	1,267,951	-318,112	616,593
2006	2,148,998	580,054	49,880	469,811	311,175	394,585	90,207	1,660,948	-638,815	644,298
2007	2,680,467	539,340	44,750	867,109	794,104	537,926	59,379	2,368,961	-1,133,986	708,020
2008	3,085,621	698,103	346,540	1,180,216	1,037,563	697,279	73,060	2,814,821	-1,682,267	827,970
2009	2,980,967	661,430	412,470	797,623	919,313	588,617	85,377	2,503,696	-992,637	712,440
2010	3,103,855	727,215	423,150	655,139	863,591	543,886	114,408	2,550,717	-881,549	675,800
2011	3,234,060	714,670	454,760	596,453	833,730	406,558	120,000	2,728,471	-840,799	704,080

Notes. NA: not available. Source: Official statistical agency for Montenegro, Central bank of Montenegro.

Despite all obstacles, research proceeded with analysis using available data from official sources, knowing that results will be of limited use, especially for reliable forecast. The results we provided can be used as good approximation of relations and dependencies in economy, but should be treated as work in progress, aiming to provide better conclusion once inputs are improved.

For the purpose of analysis presented below, following data were used: gross domestic product (GDP) in current prices; personal consumption; government consumption; gross and net investment; trade balance; total exports of goods; total import of goods; and loans to households. Disposable income was estimated using following definition:

$$Y_{disp} = GDP - T + T_r + NFI + NT \tag{1}$$

where:

Y_{dsip}: disposable income;

GDP: GDP in current prices;

T: tax revenues;

T_r: transfers to households;

NFI: Net factor income;

NT: net transfers from abroad.

Aggregate Demand in Montenegro

Analysis of trends in components of demand in Montenegro has shown consistent growth (excluding 2009, due to global crisis, all components were declining).

Comparing trends in each individual component and total GDP, high correlation was observed, but the highest correlation was in relation to household consumption and GDP (see Table 2).

Table 2

Correlation Between GDP and Various Components (2000-2011)

	GDP	GOV	INV	HOUS	Trade bal.
GDP	1.000000	0.955884	0.867430	0.991619	-0.859827
GOV	0.955884	1.000000	0.780955	0.921240	-0.770110
INV	0.867430	0.780955	1.000000	0.907988	-0.990327
HOUS	0.991619	0.921240	0.907988	1.000000	-0.908378
Trade bal.	-0.859827	-0.770110	-0.990327	-0.908378	1.000000

The most important element to notice is very high negative correlation coefficient between GDP and international trade balance. This leads to conclusion that economy is extremely import dependant and that most

of multiplication effects were transferred abroad. That is why it is considered important to estimate several functions in order to analyze growth potential under currents trends and structure in the economy.

In order to analyze impact from demand components to GDP, the first step is to estimate consumption function, tax function, and import function.

Consumption Function

Household consumption in Montenegro has grown almost constantly (except in 2009), following very similar trend to GDP.

What is very important is the fact that, until 2009, consumption exceeded disposable income, leading to negative savings. This was influenced by increased supply of loans offered by commercial banks and other financial institutions, with favorable interest rates. General optimism and affordable sources to finance lead to growth in expenditures (see Figure 3), in personal debt as well (see Figure 4), which influenced drop in consumption in 2009.

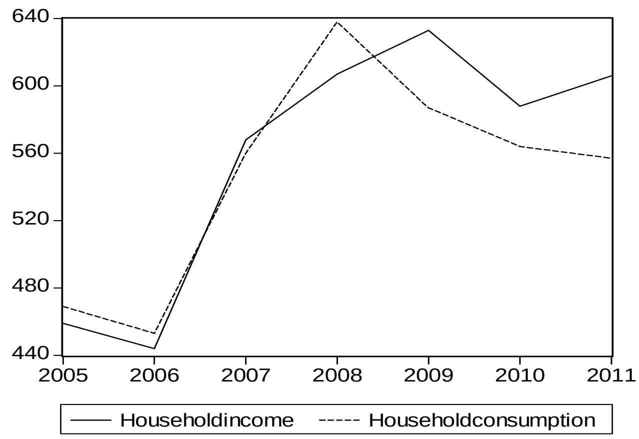

Figure 3. Household consumption in Montenegro.

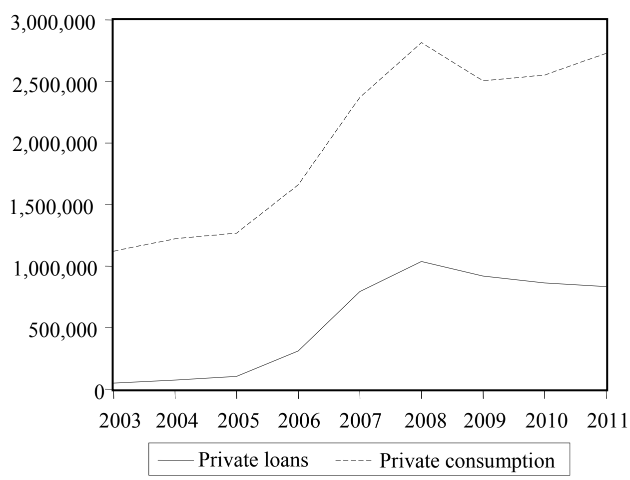

Figure 4. Private loans in Montenegro. Source: Based on data from MONSTAT (Statistical Agency of Montenegro) (Retrieved from http://www.monstat.org).

Consumption function was defined as dependable on disposable income (see Table 3).

$$C = c_6 + c_7 Y_{disp} \tag{2}$$

where:

C: consumption;

c_6: authonomyus consumption;

c_7: marginal propensity to consume.

Although, as it was mentioned previously, some results are not fully statistically significant, presented results may be used to get clearer picture on economic structure and in later steps give approximation of some indicators relevant for analysis. In this case, marginal propensity to consume will be used, as input to estimate effects of investment in small open import dependable economy.

Table 3

Estimated Consumption Function for Montenegro

Variable	Coefficient	Std. error	*t*-statistic	Prob.
C_6	274,361.3	395,663.0	0.693422	0.5189
Y_{disp}	0.829064	0.159496	5.198035	0.0035
R-squared	0.843846	Mean dependent var		2,270,795
Adjusted *R*-squared	0.812615	S.D. dependent var		580,987.2
S.E. of regression	251,497.9	Akaike info criterion		27.94321
Sum squared resid	3.16E + 11	Schwarz criterion		27.92776
Log likelihood	-95.80125	Hannan-Quinn criter.		27.75220
F-statistic	27.01957	Durbin-Watson stat		1.018929
Prob (*F*-statistic)	0.003473			

Notes. Dependent variable: *C*; Method: Least squares; Sample: 2005, 2011; Included observations: 7.

Tax Function

Tax function (see Table 4), was estimated using similar approach as in case on personal consumption.

Function was defines as:

$$T = T_a + tY \tag{3}$$

where:

T: total taxes;

T_a: autonomous taxes;

t: marginal tax rate;

Y: GDP.

Table 4

Estimated Tax Function for Montenegro

Variable	Coefficient	Std. error	*t*-statistic	Prob.
T_a	466,795.5	112,265.8	4.157951	0.0088
Y	0.085130	0.040572	2.098251	0.0900
R-squared	0.468235	Mean dependent var		698,457.3
Adjusted *R*-squared	0.361882	S.D. dependent var		67,380.09
S.E. of regression	53,824.74	Akaike info criterion		24.85981
Sum squared resid	1.45E + 10	Schwarz criterion		24.84436
Log likelihood	-85.00934	Hannan-Quinn criter.		24.66880
F-statistic	4.402656	Durbin-Watson stat		1.486141
Prob (*F*-statistic)	0.089953			

Notes. Dependent variable: *T*; Method: Least squares; Date: 05/16/13 Time: 12:35; Sample: 2005, 2011; Included observations: 7.

Marginal tax rate is moderately low, which is the result of intentions to provide favorable tax system in Montenegro in order to attract investment and accelerate production and income growth.

Import Function

Import is one more variable highly correlated with income and consumption (see Figure 5), due to low level of production of goods in Montenegro, both for final and intermediary consumption.

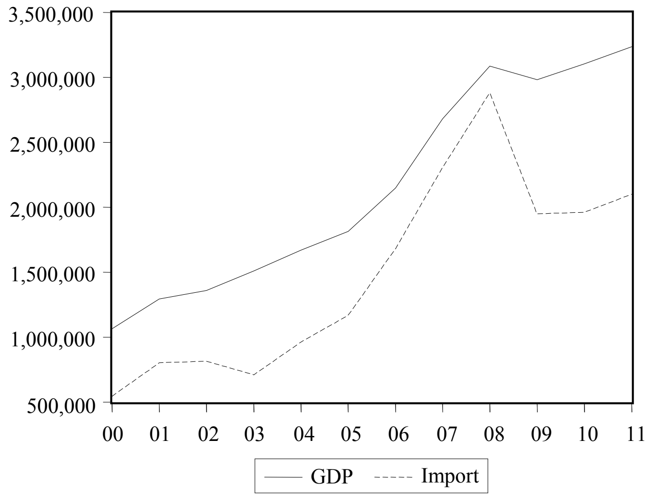

Figure 5. GDP and import. Source: Based on data from MONSTAT (Statistical Agency of Montenegro) (Retrieved from http://www.monstat.org)

Based on the same set of data as for consumption, import function was estimated (see Table 5).

$$M = M_a + mY \tag{4}$$

where:

M: total import;

M_a: autonomous import;

Y: GDP.

Table 5

Estimated Import Function for Montenegro

Variable	Coefficient	Std. error	t-statistic	Prob.
M_a	44,712.39	815,117.8	0.054854	0.9584
GDP	0.720766	0.294576	2.446796	0.0582
R-squared	0.544909	Mean dependent var		2,006,120
Adjusted R-squared	0.453891	S.D. dependent var		528,828.9
S.E. of regression	390,800.4	Akaike info criterion		28.82474
Sum squared resid	7.64E + 11	Schwarz criterion		28.80928
Log likelihood	-98.88658	Hannan-Quinn criter.		28.63373
F-statistic	5.986810	Durbin-Watson stat		1.249020
Prob (F-statistic)	0.058165			

Notes. Dependent variable: Import; Method: Least squares; Sample: 2005, 2011; Included observations: 7.

Marginal propensity to import of 0.72 is very high, but it shows strong import dependency of Montenegro. As explained before, due to limited goods production, import of final goods is very high, as shown in Figure 6.

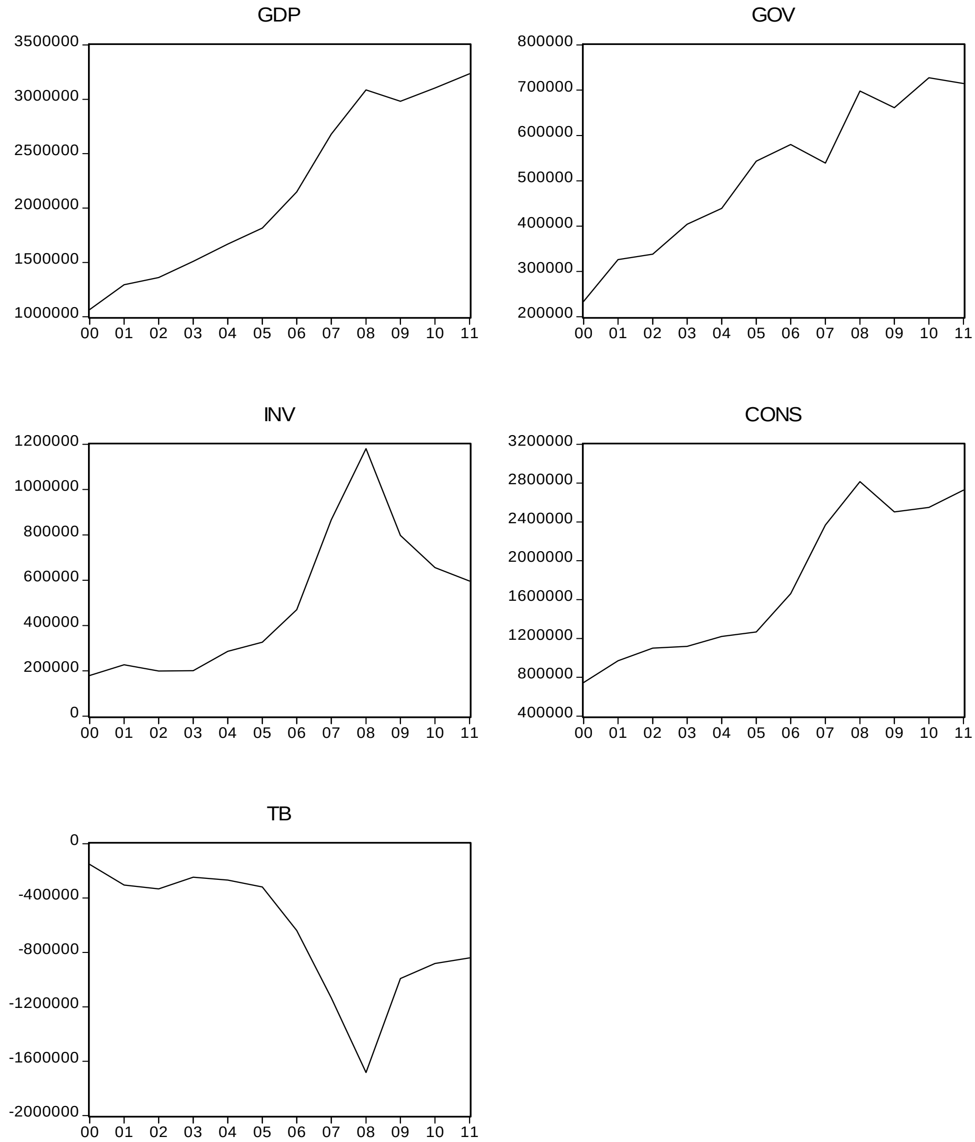

Figure 6. Testing for cointegration between variables. Source: Based on data from Monstat (Statistical Agency of Montenegro) (Retrieved from http://www.monstat.org).

Model

Final step in analysis is to estimate model reflecting equilibrium in the market for goods and services in open economy, as follows:

$$GDP = c + C + I + G + E - M \quad (5)$$

$$C = c_6 + c_7 Y_{disp} \quad (2)$$

Prior to estimating the model (see Table 6), verification whether time series are stationary or not was done, and due to short time serious, individual statistics are not stationary, which means that estimated parameters are biased. But, analyzing combined trend for each individual variable has shown very similar path (see Figure 6). Cointegration, by using Johansen cointegration test, was tested and received positive results. This means that estimated model can be used as good approximation, but not as fully reliable source for decision-making or forecast.

Table 6

Equilibrium in the Markets for Goods and Services Model for Montenegro

	Coefficient	Std. error	*t*-statistic	Prob.
C(1)	107,771.7	107,670.0	1.000945	0.3502
C(2)	0.978844	0.043450	22.52823	0.0000
C(3)	0.964337	0.225361	4.279068	0.0037
C(4)	0.395904	0.276902	1.429761	0.1959
C(5)	0.540487	0.184153	2.934997	0.0219
C(6)	274,361.3	395,663.0	0.693422	0.5104
C(7)	0.829064	0.159496	5.198035	0.0013
Determinant residual covariance		6.67E + 18		
Equation: $GDP = C(1) + C(2)*C + C(3)*G + C(4)*I + C(5)*STS$				
Observations: 7				
R-squared	0.999406	Mean dependent var.		2,721,280
Adjusted R-squared	0.998219	S.D. dependent var.		541,604.9
S.E. of regression	22,858.00	Sum squared resid.		1.04E + 09
Durbin-Watson stat	2.334389			
Equation: $C = C(6) + C(7)*Y_{disp}$				
Observations: 7				
R-squared	0.843846	Mean dependent var.		2,270,795
Adjusted *R*-squared	0.812615	S.D. dependent var.		580,987.2
S.E. of regression	251,497.9	Sum squared resid.		3.16E + 11
Durbin-Watson stat	1.018929			

Notes. Estimation method: Least squares; Sample: 2005, 2011; Included observations: 7; Total system (balanced) observations: 14.

Giving to import the status of exogenous variable is not quite good approach, but provided better statistical results.

While statistical significance is questionable in case of some estimated parameters (constant particularly), research results are accepted as fair approximation economic relations.

As it can be seen for estimated results, growth in consumption will lead strongly to GDP growth, while effects from investment and trade balance are lower than desired. This is probably due to high import dependency, in which case benefits of investment and/or export will probably go to international economic partners—Montenegro imports goods from.

If apply estimated parameters (marginal propensity to consume, marginal tax rate, and marginal propensity to import) to the theoretical foundation of model of equilibrium in the market for goods and services, it can be defined as (Vukotic, 2001):

$$Y = C + G + I + E - M \tag{6}$$

$$C = c_6 + c_7 Y_{disp} \tag{2}$$

$$T = T_a + tY \tag{3}$$

$$Y_{disp} = Y - T + T_r \tag{7}$$

$$M = M_a + mY \tag{4}$$

Multiplier define impact from one unit change in any exogenous variable (*G*, *I*, *E*), would be:

$$p = \frac{1}{1 - c_7\left(1 - t\right) + m} = 1.03 \tag{8}$$

Such a low value is the result of high marginal propensity to import, which diminish positive effects of investment and/or export for income growth.

Implication for Further Economic Perspectives

Analysis of economic behavior on goods and services market in Montenegro has shown several characteristics:

- Household and government consumption were dominant element of aggregate demand;
- Investment was growing, although slowly compared to personal and government consumption, but provided real growth dominantly in service sector, which influenced rapid growth of import of goods;
- If such performance continues in the future, due to exporting multiplying effects abroad, growth will likely to be slower than possible. This is why economy should straightening domestic production of goods, and those who define policies should be aware that with such high import and finance dependency, long term growth rates will be less optimistic and more difficult to be predictable;
- In such manner, domestic production, entrepreneurial activities, business climate favorable to investment, should be supported. Growth should be more investment then demand driven.

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Designing Social Programs in Circumstances of Informational Asymmetry

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The social programs represent the redistribution of revenues collected from taxpayers toward persons considered to be in need according to the public policies. Therefore, the government-financed welfare program is often looked as a type of a safety net of the state itself by groups of persons having certain features which are detected according to a selection process. The state should grant the ultimate successive safety net to persons in whose cases the previous safety nets would have failed. The beneficiaries are persons selected by different decision-makers who are aware of the actual status of that person. The individual who actually grants the access to the social program does not have all the necessary data. In this context, is the redistribution system effective? The study aims to determine an equilibrium in social assistance and effective methods for providing social benefits. The study has proposed to build a model using the concept of labelling. The quantitative model hereby proposed represents a possibility to design social programs in circumstances of asymmetric information. Therefore, it reveals the sensitivity of the social programs toward social controls or penalties, and it has a stabilizing effect on the economic crisis. The study proposes the use of an expert system (SE) in redistributing incomes in social assistance and concrete ways of state intervention.

Keywords: expert system , redistribution, social benefits ,social assistance

Introduction

The need for state intervention is defined in a view to secure a minimum level of social protection by promoting the concept of "welfare state", where the state provides the maximizing of social welfare. Stating the role of the state in securing a minimum social protection relates to the need to assess the public policies from the perspective of criteria of efficiency and effectiveness, whose social objective may be represented by:

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- Obtaining a net social benefit;
- The allocation of resources according to the Pareto optimum;
- The concept of social equity (Hillman, 2003).

The role of the state regarding protecting individuals against social risks first brings to attention the problem of redistributing public resources—this goal is expressed by the notion of Pareto optimality. In practice, the state provides help to support people who failed in their own responsible behaviour, by collecting certain amounts from other individuals. The redistribution of such amounts may raise controversies issued from the very definition of the "support", which requires reallocation of the money collected from other persons. Individuals may create safety nets to support themselves, by means of money saving.

A safety net is not created solely by individual efforts; a certain contribution of the family may appear as a most important feature while the respective society has a family-based culture and tradition (Akerlof & Kranton, 2010). The state may act on top of the efforts deployed by such individuals of the society, therefore completing the existing safety nets. Many of the controversies regarding the efficiency and the effectiveness of public policies regarding social protection come from a number of opinions about sources of poverty which generate the need for state social protection for the people in need. We can agree that the need for support may also occur unintentionally, as a misfortune, resulting in most cases from an accident. Therefore, it seems reasonable for the individuals not to be responsible for their needs when such needs occur involuntarily.

This first finding is a premise for an informational asymmetry in granting social programs, the entity granting such benefit being not aware of the precise situation of the aid beneficiary.

This flawed knowledge is reflected by the fact that an applicant may submit an incorrect application (thus leading to an error generated by over-inclusion) and also in the sense that a potential beneficiary may not submit an application at all (error of sub-inclusion).

A second preliminary finding is a hierarchy of safety nets where informational asymmetry exists.

Literature Review

The classic approach of the adverse selection and moral risk problem belongs to Mirrlees (1971). The adverse selection models, initially simple, have been developed in various theoretical and practical directions. Contributions to the theoretical development belong to Green and Laffont (1986), Myerson (1978), Dasgupta, Hammond, and Maskin (1979) (Musa & Rosen, 1978; Maskin & Riley, 1984), credit rationalization (Stiglitz & Weiss, 1981; Bester, 1992; Harris & Raviv, 2005), optimal taxation (Mirrlees, 1971, 1986), employment contracts (Grossman & Hart, 1983), regulation (Laffont & Tirole, 1993), and insurance (Stiglitz, 1998; Brunner & Pech, 2006).

Methodology and Results

The Concept of Labelling in Social Assistance

Figure 1 is a scheme of the hierarchy of the safety nets together with their financing sources and the labelling method of the beneficiary of the social aid/support.

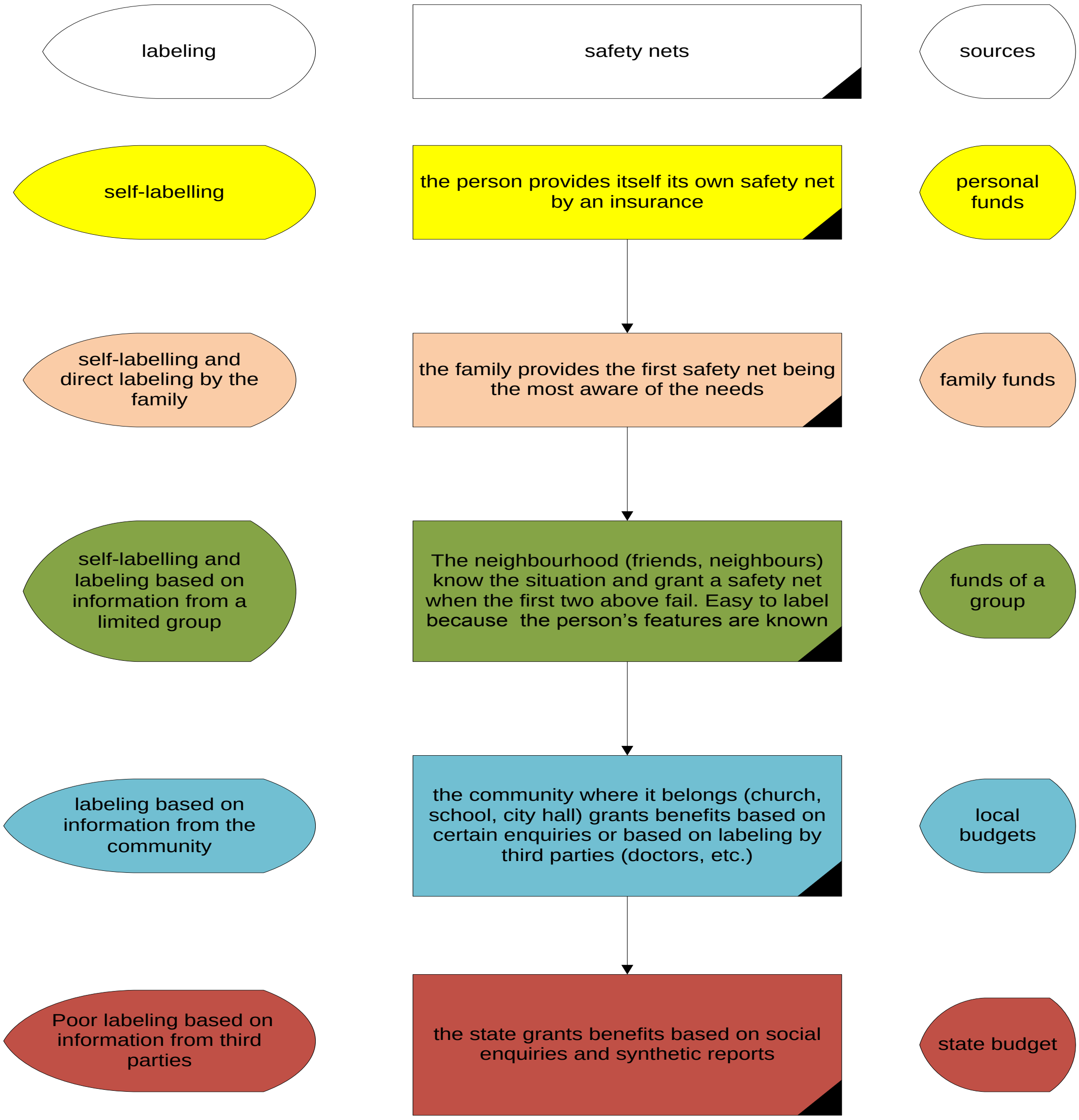

Figure 1. The hierarchy of safety nets.

One can see that the prerequisite for obtaining the aid is the qualification, firstly performed by the individual itself, and then, in circumstances of informational asymmetry, by the family, the community, the church, the doctor, and finally the state.

The labeller is the person performing the assessment based on an attribute/eligibility criterion and based on such assessment, they perform the categorization in the respective class/category of social aid—such labeller may be the beneficiary of the aid, the doctor, or the social worker.

Another management process may involve another stakeholder, respectively, it is the entity that actually pays the social program (family, community thought its representatives or the state by its representatives). The person who pays may or may not be the same person as labeller.

The relationship among payment, control, and the benefit of the labeller, will be further tackled in this document according to a model based on the informational asymmetry.

Thus, reciprocal to the individual's capabilities to cover their needs, it will be assessed by a new labeller

also supposed to provide protective measures for another need.

Another basic concept in this paper is the value obtained by an actor in the process of redistribution pertaining to the utility function. The usefulness, for a family that supports a relative, may represent safeguarding the public image of that family, for the state the challenge of redistribution is general welfare, for a mayor the sense of a fulfilled duty or an electoral purpose. Therefore, labelling in a group in need for aid/support may be performed by a personal choice or by letting the intervention of a third party (the labeller), first considering the utility concept and the process for the identification of the potential beneficiaries (Akerlof & Shiller, 2009).

Groups with needs may be identified using a variety of eligibility criteria such as: age, the employment status of the head of the household, disabilities, veterans, lack of a dwelling, the level of the revenues, etc..

Labelling takes into consideration such criteria, some of them being objective—the age, others subjective, which may be influenced by the decision of a third party, like physical disabilities, or the decision of the aid/allocation provider, such as reporting low revenue.

A simplified model is submitted in Figure 2.

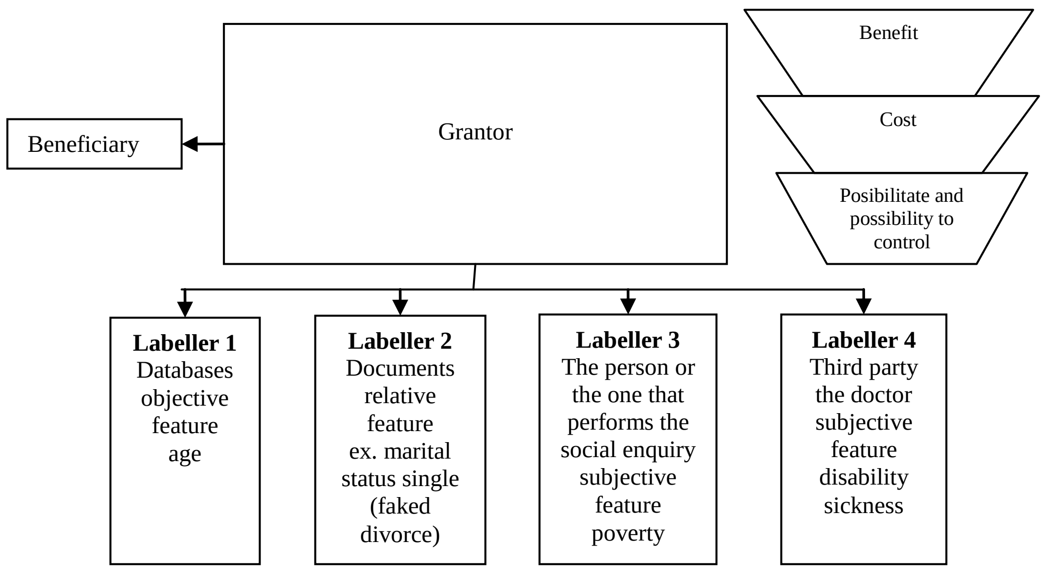

Figure 2. Labelling.

For example, according to Figure 2, an uncle may grant to his nephew an aid in cash money, the benefit being the safeguard of the image of the family (actually the purpose of such aid) and it has a certain cost, also providing to the uncle the right to have control over the amounts given to the nephew. This aid is granted based on the request submitted by the nephew who is labelling himself as being in need (subjectively) but possibly accompanied by a medical paper issued by a doctor (subjectively/objectively). In a similar way, the state offers a social program based on a certain objective (avoiding the situations of social exclusion within a certain geographic area, for example), the utility of the programme (social inclusion of a number of families/children), costs and the possibility of being in control.

The labelling process allowing a certain degree of protection is only known by some members of the society and, based on the increase of the labelling level, there is a possibly for informational asymmetry to appear.

In other words, the more limited the capacity of the labeller to know the actual status of the potential beneficiary, the larger the error margin of the labelling process.

Error may be defined with two components: the first degree error, supposing that the person is in need but it cannot be identified even if it complied with the eligibility criteria (sub-exclusion error), and the second degree error which presupposes fraud (over-inclusion error).

In the example given above, the uncle knows very well the situation of the nephew but, by comparison, the state has little information about the situation of a certain person, such information to be obtained by means of third parties (doctors, social workers, labellers, etc.).

The liberal conception about the organization of social security the state must not discourage the initiatives, the opportunities, the responsibility, and must make room to encourage each individual to voluntary take action.

A liberal-type social assistance system, based on testing the subsistence means of those served, presupposes:

- Setting a needs threshold (by adopting a certain definition for poverty, for example);
- The (non) stigmatization of the beneficiary;
- Proof to show the situation of need/difficulty by the beneficiary—it means that specialised knowledge and competence are needed;
- Efficiency and effectiveness in targeting the categories that are in need of a social support;
- A complex administrative apparatus;
- Protecting the economic and financial resources of the society, by investing only in the individuals that "deserve" to be supported;
- Avoiding conflict situations between those who actually provide the financial support and the beneficiaries of such support.

The Model of Asymmetry of Information in Providing Social Assistance Benefits

Accurate information proves to be difficult to acquire a better labelling level—that is why obtaining assurances of accuracy implies control, and therefore involves costs.

The cost of labelling control consists of the cost of obtaining the information concealed by the person providing the social benefit, respectively the cost of labelling the person applying for a social benefit.

By definition, the agency theory states that a contract is a secure promise made by two parties. Such promise provides the obligations of the parties in whatever circumstances. The party who proposed the contract is called a decision-making entity or the principal, and the party who accepted the contract is called the agent.

The starting point of the agency theory is that an entity enters into a transaction with another entity with the sole purpose to obtain maximum gains while observing certain rules.

This is a consequence of the concept of the "invisible hand" of Adam Smith—that is why the agency theory is an utilitarian theory, according to which the consequence of an action may be considered as being ethical if it generates more welfare (more revenues) than "bad" results (costs).

The entities of such a model are two individuals, two public entities, or two private entities, carrying out a certain transaction (NGO shareholders—beneficiaries of social support, grantor of the benefit—beneficiary, grantor of the benefit—labeller). Practically, since there are many relationships in which information is assymetrical. We define that the principal is the grantor entity and the agent is the labeller.

Another example is given by the application of the agency theory to the relationship grantor—applicants

for a social benefit; the starting point is that the applicants for social benefits have more information (they know their revenues, they know they have no poor health, and such situations have a negative impact on the capacity of the principal to monitor in an effective manner). A procedure allowing the principal to be more in control is, for example, to develop the control procedure and/or to increase the impact of the sanction. An aspect that is worth mentioning is that in many occasions the individual is erroneously punished instead of the labeller.

The asymmetry and the imperfection of information may generate two types of risks: the risk of adverse selection that may be reduced by means of signals or filters and the moral risk, studied within the agency theory with the model principal—agent. The model to add up the article *Modelling the Use of Alternative Channel Allocation in Granting Benefits of Social Assistance* (Belciug, Corcheş, Creţu, & Lupu, 2013).

The model principal—agent refers to the conflicts between the principal who hires an agent in order to act in its interest. The moral risk models suggest also a very important idea stating that, for the principal, the costs incurred by control decrease when the contract provides for a high level of penalties. Another consequence of the moral risk model is the subsidization of lower quality goods, starting from the idea that the individuals with less or no revenues buy very cheap goods for subsisting. This may explain granting the allocations in the form of tickets or coupons to allow buying cheap goods, but this would also imply a certain "stigmatisation" of the beneficiaries.

The classical allocation programmes are characterised mostly by targeting certain groups having certain features (they have no possession of goods, revenues, are children or elderly people), represent a category and/or fulfil certain eligibility criteria (are above or below a certain level provided by law). This way may induce the intention and/or the temptation to stimulate by the potential beneficiaries, meaning that they may try to get self included in the pattern of the targeting.

For example, if an allocation is granted to single individuals, such individuals may get a divorce for collusion. This paper shows a new way of designing the allocation of budgetary resources by means of social benefits, based on self-regulation.

A first model representation can be designed similar to a self-regulating process (see Figure 3).

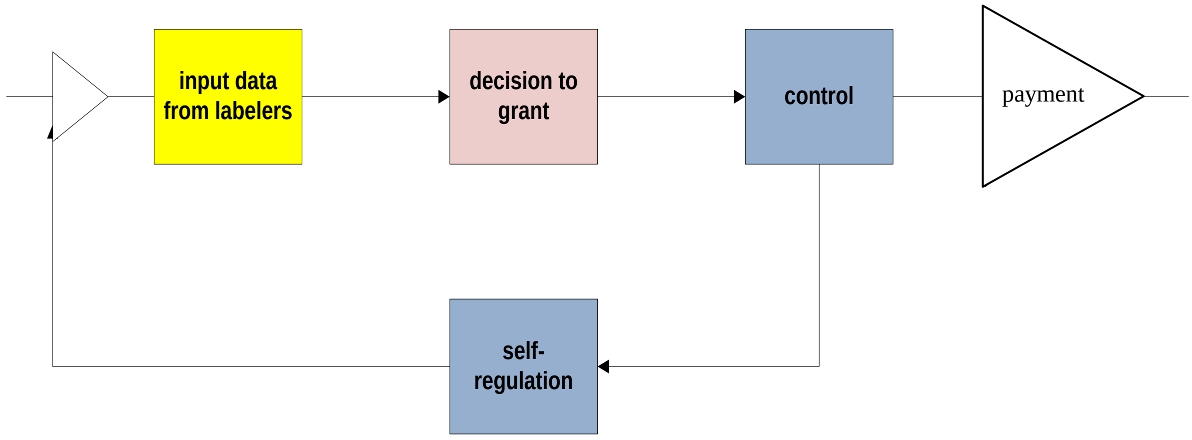

Figure 3. Mechanism for the allocation of social services using the self-regulation by means of control.

This approach is feasible when the actors behave in a rational manner and they are all aware of the "game rules". The labeller may or may not perform his duty correctly, and the principal applies a sanction following an inspection (we note this cost with h).

The balance is achieved by the labeller. The labeller has a gain if it applies wrongfully the label noted with *w*, except for the case when the principal (family, government, city hall) makes a complaint followed by a penalty noted with *a*. The labeller has noted a *v* level of wage. The government gains from such a program a value noted with *o*.

Table 1
The Model

		x	$1 - x$
		Government controls	Government does not control
y	Incorrect labelling	$V - a, a - h$	$V + w$, - w
$1 - y$	Correct labelling	$V, o - h$	V, o

The game represented in Table 1 has no balance in pure strategies and the principal is supposed to choose a mixed strategy..

The labeller does not care whether the label decides is correct or not in the case when:

$$y * (V - a) + (1 - y) * (V + w) = y * (V) + (1 - y) * (V) \tag{1}$$

$$y = w / (a + w) \tag{2}$$

The decision of the labeller does not depend on the level of the revenues, but of the sanction (*a*) and the benefit (*w*) obtained. At a low level of the sanction, the labeller shall permanently commit fraud, and, at a high level of the sanction, he may be more moderate.

One may say that the present model is valid only for the cases with fraudulent labelling errors.

For the labelling error from non-intimation, the sense of the penalty notion may be expanded. Therefore, for an individual who is poor, uneducated, and located in a very small hamlet, the fee of the penalty is given by the administrative costs of submitting an application and evidence of eligibility[1].

The Sensitivity of the Balance on the Allocation of Social Assistance Benefits

If the benefit is granted for health reasons, the labeller is the doctor who is tendency to provide a wrong label which is proportional with his illicit gain (*w*) in relation with the value of the punishment (*a*), for example, withdrawing his license to practice medicine.

If the benefit is granted because of low revenues, the labeller is initially the person declaring itself to be poor, and the balance is achieved at his level by the social benefit and the value of the fine/penalty or the value of the work hours he is supposed to supply.

Starting from this example, and taking into consideration the successive safety nets described above, now introduce a new complementary labeller (mother, family, priest, and mayor) for which the same balance is to be achieved as described in equation (1).

The decision to grant the benefit shall be obtained at the intersection of these balance statuses in relation with the failure of the previous safety nets.

In order to perform a payment within a safety net, it is important to analyse the failure of other measures which should have been given by earlier safety nets.

Figure 4 of the balance for *w* between 0 and 100 and *a* between 0 and 50, or between 0 and 200, shows the changes in the behaviour of the beneficiary.

[1] This phenomenon is mostly in poor countries where there are high costs to procure the necessary documents for proving eligibility.

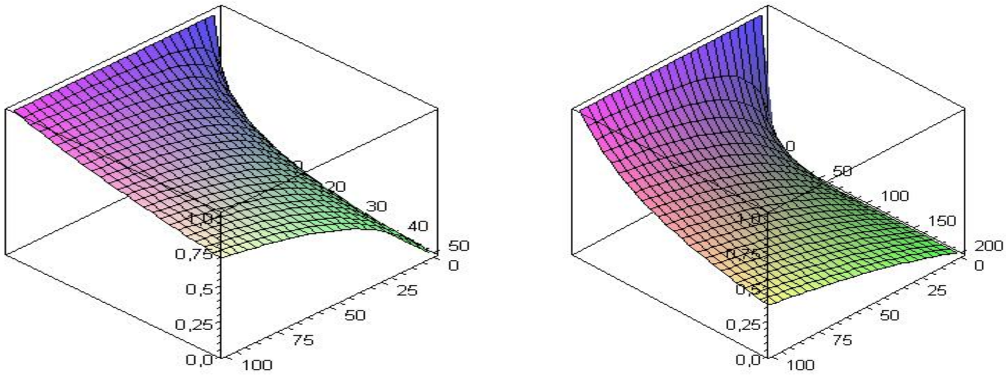

Figure 4. Sensitivity analysis of the labeller.

Figure 4 shows the fraudulent behaviour of the potential beneficiary being modelled by a coherent application of effective coercion. The utility of a person depends on his consumption of material goods, his reputation within the community, an integration variable within the society behaviour as well as his personal preferences. A way helping a correct targeting is given by the correlation between the support w with the other integration variables.

The balance for the grantor of a social benefit (control and social inspection). The decision for the subsidies grantor whether to perform an inspection is modelled according to the following balance equation:

$$x(a - h) - (1 - x)w = x(o - h) + (1 - x)\ o \tag{3}$$

$$x = (o + w) / (w + a) \tag{4}$$

where $o/w = s$ is the ratio between the value obtained by the grantor and the cost incurred by the obtention of the benefit. This ratio represents in fact the gain of the grantor (for example, increase of the birth rate, reduction of unemployment) and the cost of the benefit (an allocation of 30 monetary units). The quantification of benefits is a difficult process. For example, the state is interested to grant support to the sick elderly people thus obtaining a benefit of one monetary unit. In this case, there is a labelling according to age and a labelling by the doctor (the sickness).

The ratio $a/w = t$ is between the fine/penalty and the gain of the beneficiary.

For example, the fine/penalty for the non-declaration of revenues is of 100 monetary units for a benefit of 30 units. This ratio is given by the balance at the level of the labeller. Initially suppose, in a simplified manner, that this value is constant and takes into consideration the sanction policy.

The equation (4) then becomes equation (5).

$$x = (s + 1) / (t + 1) \tag{5}$$

The error risk is reduced in regard to a social benefit, for example, when the state labels children of a certain age, the personal code is solely sufficient for labelling. This is why the frequency of controls may be low, close to zero. If the probability of error w increases in the conditions where suppose that the fine increases proportionally, then the ratio o/w becomes important, respectively the value obtained a (the support policy in relation with the labelling fraud). The use of this model provides numerous applications in the design and quantitative analysis of social programmes.

For designing an optimal policy shall design the graph of the above function with s values between 1 and 2 and t between 5 and 10 (see Figure 5).

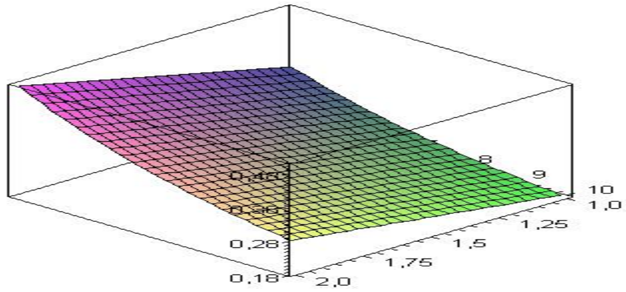

Figure 5. Sensitivity analysis of the grantor of a social program.

The optimal contract from the point of view of the grantor compared with the application for a benefit is given by:

$$\mathrm{Max}(1 - y)o - (1 - xy)w - hy \tag{6}$$

From this equation, it can be concluded that:

- Minimizing the factors that include *w* may be made by using a certain number of labellers in parallel (for example, the church, the school, and the family), respectively, an opinion from more entities (safety nets that have failed). In such a case *w* becomes a minimum between what resulted from several labellers related to the safety nets that have failed and maximize the amounts redistributed. For example, when applying for a social benefit, the beneficiary is supposed to provide opinions from several labellers (priest, mayor, family, and professor). The state may keep in mind when controlling any signal received from any of the above labellers (Akerlof & Kranton, 2010);
- The decision to reallocate by means of a third party of a social benefit must reflect the balance for each entity taking part to the transfer.

If the state allocates a smaller amount O_1 to an NGO committing itself to further grant to the beneficiaries the amount O_2, modelling an allocation is made by the balanced system.

$$\mathrm{Max}(1 - y_1)o_1 - (1 - x_1y_1)w_1 - h_1y_1 \text{ (when the state allocates to the NGO)} \tag{7a}$$

$$\mathrm{Max}(1 - y_2)o_2 - (1 - x_2y_2)w_2 - h_2y_2 \text{(when distributing the benefit between the NGO and the beneficiary)} \tag{7b}$$

$$o_2 = k \times x \times o_1 \tag{7c}$$

The three equations above determine the optimum model of redistribution by solving the system of equations (7).

Active Involvement of the State in the Redistribution

The above model proposes an active approach of social protection where the state has an active role and consists in supporting the local business environment by using the labour force of the persons benefitting from social benefits.

This action of the state referring to the influence on the real economy including the part related to the social economy may be modelled using the Porter model (Porter diamond).

The Michael Porter model applies to strategic diagnosis in the field of activity where a company operates. The government influences all the facets of the "diamond" and especially the conditions of the factors (Porter, 1979).

From a wider perspective, the role of the government is of a catalyst, to encourage the development of the companies, to be in the outpost of the demand for innovative goods and services, to facilitate the creation of specialized competencies, to ensure the observance of environmental and safety standards, to support the

anti-trust policy and to stop collusive behaviour, to stimulate investments in human capital, in innovation and in infrastructure, and a more effective re-distribution.

The aim of the paper is to help modelling the governmental action in the field of redistribution, having as a catalyst the labour force of the socially assisted persons, and the development of local investments including those that can be used in the redistribution of public revenues by other means than money.

The use of free labour force of the socially assisted persons by economic entities at local level, stimulating such entities in order to obtain credits destined to social investments (day care centres and social enterprises) shall also have a multiplied effect at the level of the local economy, but also a regulatory role by weakening the demand for social support due to incorrect labelling.

The measures that may be taken within the Porter model dimensions are the following:

- The conditions of the factors (supply). In this dimension, it included the natural resources, the human resources, the financial resources, the physical and administrative infrastructure, informational infrastructure, science and technology;
- In the context of the allocation model of social services by a market analysis performed at the level of the territorial state units, local NGOs may be developed in order to use the labour force of the socially assisted persons as a free production factor. In the same context, each territorial structure shall perform studies regarding the resources and shall control the activity of certain NGOs;
- The conditions of the demand. Here included the size of the market, the dynamics, as well as the rate of sophistication of local clients, the existence of specialised market niches;
- Can keep in mind within the stimulation policy also the final products of redistribution (social canteens, firewood) specific to local communities but also the demand associated with some handmade goods or supposing manual labour (picking herbs and fruit). Such opportunities shall be explored at the level of local governmental structures, having an active role;
- The context of the strategy and rivalry of companies. It refers to the intensity of local competition and the existence of a stimulating environment that requires competition. The district/county agencies shall play an active role in the development of a strategy related to the development of economic entities, including the control function;
- Upwards and downwards industries. This refers to the presence of valuable local suppliers and the existence of related industries allowing vertical integration, for example, the fishing industry and trade with fishing products.

The same type of analysis may be made also when reallocating by means of a redistribution channel other than money, for example, granting benefits in the form of social tickets.

In this case of social tickets control is provided by controlling such tickets but also by the fact that at the level of the beneficiaries the allocations may be used only for food, in such case the utility diminishes in the case of persons that incorrectly labelled themselves in this category.

Aggregation Model of Redistribution

This model intends to provide a quantitative analysis regarding the decision of a social benefit and the opportunity of allocating such benefit by means of third parties, respectively by mayors or church priests.

The expansion of the system of equation (7) shall be made for each programme according to equation (8):

$$\text{Max}(1 - y_{ij})o_{ij} - (1 - x_{ij}y_{ij})w_{ij} - h_{ij}y_{ij} \quad (8)$$

Replacing $x_{ij}y_{ij}$ in the equilibrium model above, this maximum becomes a function of o_{ij}, w_{ij}, h_{ij}, and a_{ij}.

In order to ensure the effectiveness of the allocation programmes shall consider that o_{ij} has a distribution given by the amount and the specific granting restrictions as well as the number of beneficiaries.

The optimal quantitative solution for allocation of social programmes is found at the intersection of the solutions ensuring the maximization at each level for each of the functions and equilibrium condition of budget.

The equilibrium condition is in each type of social programmes financing it to be in the first part of the Laffer curve.

The elaboration of an aggregated social welfare function where political decisions play a fundamental role is a difficult process, because it does not mean only adding up the utility functions of each individual in the society.

There are several theories in this sense (consider for example, the welfare function of a Rawlsian type according to which the objective of the public authorities is to maximize the welfare of the poorest individual).

When social welfare is defined as the minimum of utility at society level, welfare shall be maximised in the case of maximization of the utility of the poorest person in the society. This result requires a better efficiency of targeting.

The condition for the maximization of the aggregated allocation function shall be performed only at the utilities of the beneficiaries (the other labellers are excluded).

Using an Expert System (SE) in the Redistribution of Assistance Benefits

Since the equation (8) and the budget restrictions is very complex, to build a consistent quantitative model, shall introduce a possibility of implementation by means of SE. SE is a complex application of artificial intelligence aiming to explore a large base of knowledge to reach new conclusions about activities that are difficult to observe using similar methods, alike the human experts and the following features:

- A database represented by all the documents submitted and external data;
- A deduction algorithm specific to the respective reasoning method.

The application of the beneficiary shall be submitted by a call centre system, starting with a dialogue between the potential beneficiary that may call from any location, and a government representative or the civil servant. The potential beneficiary shall be asked about its needs and about the failure of other safety nets, but also about the amount he believes is necessary. The social enquiry shall be performed at the level of the city hall and data shall be automatically processed by an SE[2], together with information received from the other institutions, church, school, medical clinic, or other third party institutions. Data from all the above institutions shall be received through a secured web portal to ensure informational competition. According to the input data, the SE allocates an amount that can be granted and also shows/points the informational inconsistencies.

Practically, such an expert system concerning the social assistance at governmental level can be designed according to the model shows in Figure 6.

[2] An SE is a complex application (a software) which explores many input data in order to provide new conclusions about activities that otherwise are difficult to scan, using methods similar to the methods used by human experts. An expert system may succeed in problems without a deterministic algorithm solution. The main features of the expert systems are a database (a knowledge base), together with a deduction algorithm specific to the reasoning method. The expert systems are a field of the artificial intelligence, branch of informatics having as main purpose the development of programs and “intelligent applications”.

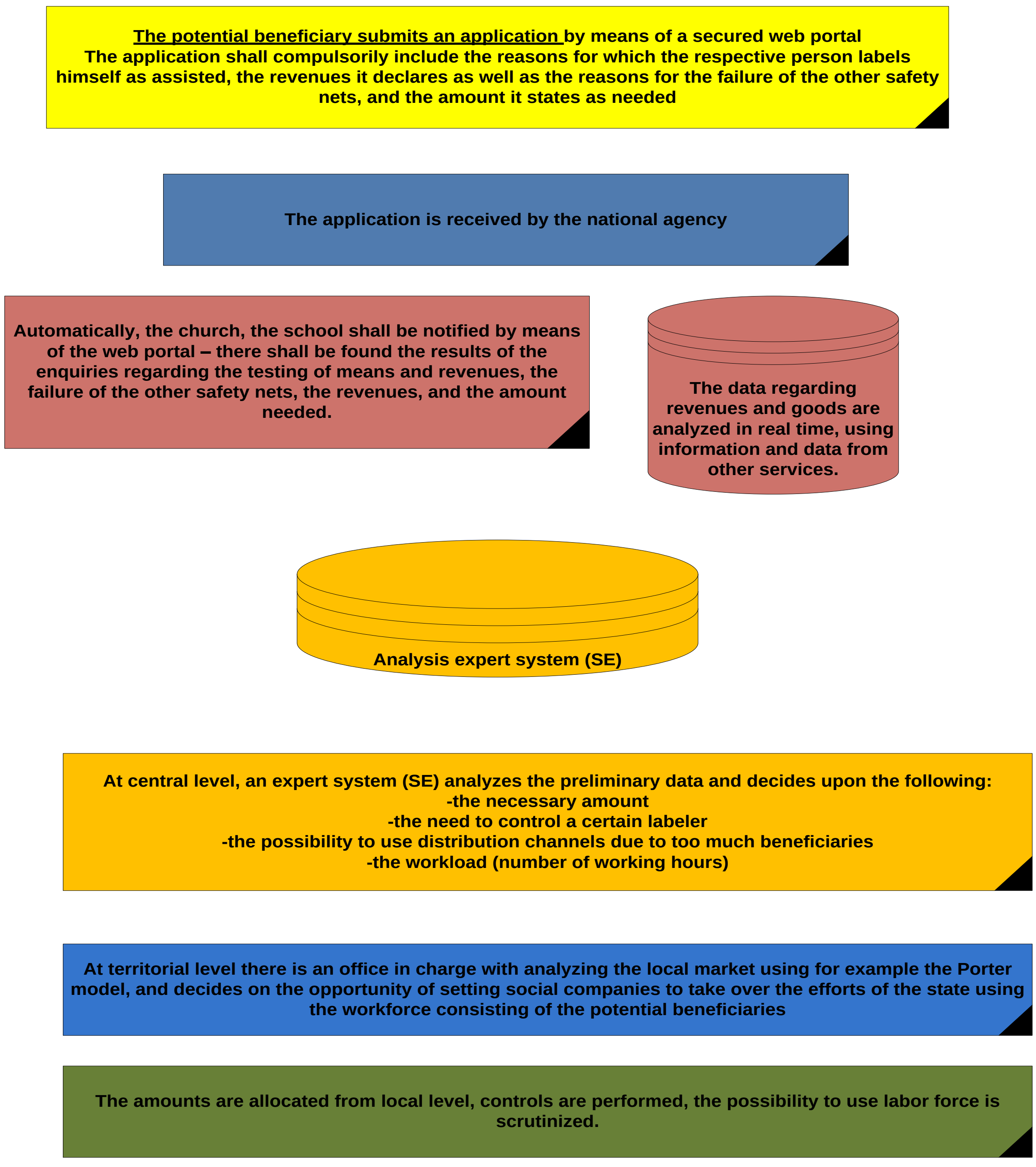

Figure 6. Establishment of an SE modelling.

The aggregate production function with two factors of production (physical capital K and labour L, $Y = F(K, L)$) helps developers work processes related to stimulation of income redistribution to the poor. This may be used as leverage in economic stabilization during crisis.

A factor in working with capital is depreciation. Coordinating public income redistribution for social assistance uses data conditioning work.

This process implies state participation not only to a better redistribution based on labelling under asymmetric information but also its involvement in designing a strategy for promoting active labour.

Conclusions

The design of a social program that intends to minimize errors and fraud implies the following steps:

- The decision-maker regarding the label;
- The benefit of the erroneous labeller;
- Value for the benefit grantor;
- The value of the penalty;
- Control of the process.

The design of the social benefits or social services allocation factors in the interests of the beneficiary given their utility for the beneficiary, the labeller and the paying entity, according to the penalties imposed. Modelling such interests may influence the effectiveness of social allocations.

This study is observing a liberal construction of the social assistance policy. The liberal welfare state is governed by the market logic, and social assistance is based on testing the means, the benefits being destined to those with less revenues, and granting generous benefits does not represent an incentive for the labor force to get back on the market.

To maximize the efficiency of allocation in circumstances of asymmetrical information, the principal may use a specific redistribution channel that may be chosen in a similar way as the analysis methods according to the Porter model.

The grantor of the benefit must choose a mixed inspection strategy. This strategy must be very sensitive to the fine/penalty, to the cost of the control and the social benefit, while maintaining a balance for the labeller from the viewpoint of its own gain.

The lower the safety net, the lower the penalties may be kept, respectively, the paying entity is closer to the beneficiary. In circumstances of a high informational asymmetry, the conditions for penalties are very necessary to the development of social programs, affecting their very utility.

The ratio between the utility of the labeller and the paying entity of the benefit is proportional with the level of the penalty. That is why, if expand the sphere of labelling making it more heterogeneous, other penalties must be applied. The model ensures the possibility to aggregate several social programs and makes possible the modelling of their impact in the case of choosing the distribution channels in order to obtain a better targeting for an optimal redistribution.

Personal contribution to consist in using an SE together with an active policy to stimulate employment in the redistribution can lead not only to better target the labelling process based redistribution under the asymmetry of the information, but also getting an active strategy of promoting labour leading to decreased effects of the financial crisis.

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Discourse Analysis in Women Entrepreneurial Networks: A Review of the Literature

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Over the past few years much has been written about the rapid spread of various types of firm networking, the area of women entrepreneurs' networks and small business entrepreneurship is still a challenging research field. This paper reviews literature addressing women business owners from the network perspective of understanding their contribution to the existing knowledge. The paper makes use of a discourse analysis to examine a selection of empirical research articles from 2000 to 2012 on women networks in entrepreneurship research in order to convey the key concept, main findings, key contribution, and the methodology. Moreover, it identifies in a broader literature the hegemonic statements with regard to women and networks in entrepreneurship and default of the existing research. Main findings based on the discourse analysis reveal six hegemonic statements; women businesses have higher discontinuance rates and one suggested reason for this problem is that women lack of networking, women have a less diverse network, women are disadvantaged compared to men and therefore cannot network effectively, women are more likely to network with men, women favor "strong ties" and women network size is small. Methodologically, the current status of research on networks and entrepreneurship validates that most of the knowledge is gained through cross-sectional surveys. Entrepreneurs may reveal their thoughts, their experience and reflections only if the relationship between the researcher and the researched is symmetrical. Qualitative approaches are suggested in order to "tap" the voice. Moreover, researcher hopes that the literature review on women entrepreneurial network will give some inspiration to researchers.

Keywords: networks, women entrepreneurs, discourse analysis, hegemonic statements

Introduction

Increasing numbers of women are becoming leaders of their own businesses, and many are struggling to succeed. A growing body of research is exploring how different women come to business ownership, their unique challenges and strategies for success, their personal change and the processes of business development they experience. Networking is an influential tool by which entrepreneurs use a wide variety of contacts to help them achieve their business and professional objectives and it gives them greater access to information, resources, new clients and people with similar business interests so on (Ascigil & Magner, 2009; BarNir & Smith, 2002). In addition, these relationships facilitate to reduce the firm's risk of failure and take new opportunities and learning (Klyver, Kevin, & Denny, 2007). Networking is mostly important for women, who generally have more limited access to information and business contacts, whether through various

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memberships such as trade organisations, business networks, and business clubs. Most of the researcher's argument is that development or success of an entrepreneurship or an individual women firm cannot be examined without taking the entrepreneur's personal network into account. Therefore, this study has collected and analyzed the literature in the last 12 years about entrepreneurial network and attempt to solve the question "What is the contribution of existing research findings on women entrepreneurial networks to the network epistemology?".

Networks can be defined as personal relationships between an entrepreneur and his "external actors" (Sarah et al. 2010; Paul & Chin, 2010; Robinson, 2010; Birley, Cromie, & Myers, 1991). The external actors (outsiders) can be individuals or organizations.

Methodological Approach of This Study

The methodological approach of this study is inspired by discourse analysis. In the most basic terms, discourse analysis is a research method that involves studying the use of language. Researchers analyse written texts, spoken discursive sign language, and any other means through which communication is achieved. Discourse analysts generally pursue to understand discourse's relations to context, power, and interaction (Ruiz, 2009). Discourse analysis does not offer a tangible answer to problems based on scientific research, but it permits access to the ontological and epistemological enquiry (Carver, 2002). In other words, discourse analysis will enable to disclose the hidden motivations behind a text or behind the choice of a particular method of research to interpret that text (Carver, 2002).

Researcher takes social network, network, gender and network, relation, relationship and social capital as key words to search the literature researching on entrepreneurial network which are published in 17 journals (*International Journal of Gender and Entrepreneurship*; *Journal of entrepreneurship theory and practice*; *Journal of Small Business Management*; *Strategic Management Journal*; *International Journal of Small Business*; *The International Journal of Entrepreneurship and Innovation*; *Academy of Entrepreneurship Journal*; *Journal of Business and Entrepreneurship*; *Entrepreneurship & Regional Development*; *Feminist Economics*; *Journal of Management Studies*; *Gender*, *Work and Organization*; *International Entrepreneurship Management Journal*; *Journal of Entrepreneurship*; *Gender in Management*; *Journal of Business Venturing*; and *Journal of Gender & Society*) from 2000 to 2012. All the journals are high impact factor journals of entrepreneurship and gender. Then researcher selects the articles based on their relevancy. Subsequently, articles numbered and organized these literatures, including authors, date of publication, title, and journal name, contents of research, main findings, key contributions, and research method.

Findings: Hygomanic Statements

Based on the collection of relevant literatures and combined with the characteristics of entrepreneurial network in the past decade, this paper found six different hygomanic statements as follows.

Women Business Has Higher Discontinuance Rates and One Suggested Reason for This Problem is That Women Lack of Networking

Many researches revealed that women-owned businesses have higher discontinuance rates and one suggested reason for this problem is that women tend to have a higher proportion of the businesses in industries with lower return rates, such as services and retailing and other important factor lack of networking (Robinson & John, 2007; Anna, Eileen, Anne, Fuller-Love, & O'Gorman, 2012; Sappleton, 2009). For example in USA,

women-owned small firms still consist of minority of all small businesses and they are much smaller than male in terms of total sales, total assets, and total number of employees (Coleman, 2007). In USA and Korea, women-owned businesses have higher failure rates and their revenue, profit, growth, and success rate are low compared to their male counterpart (Sang, Stearns, Osteryoung, & Stephenson, 2009). However, female owners are relatively overrepresented in industries such as retail and service, but they are relatively underrepresented in industries such as manufacturing. Moreover, socialization, educational attainment, family roles, and lacking of a network of business contacts were major constraints faced by women entrepreneurs in small business (Sang et al., 2009).

Turning into the African countries, researchers revealed that because of women's multiple responsibilities at home, women have tended to choose home-base business activities and important characteristic of female enterprises is low growth rate potential of the many women managed micro enterprises (Yeshiareg, 2009). As indicated above women's enterprises have low growth rate, partially due to the type of business activities they run. Determining the reasons why women-owned and managed enterprises have low growth rate as compared to male counterparts is not as straightforward as some suggest the main reasons being lack of credit, skills, and networking (Yeshiareg, 2009; Bardasi, Blackden, & Guzman, 2008).

According to the five-country research study included face-to-face interviews with women entrepreneurs in Bahrain, Jordan, Lebanon, Tunisia, and the United Arab Emirates, findings revealed that the women business owners did not develop a very extensive network of advisors for their businesses, majority did not consult these potential advisors with any regularity and showed the relatively low level of use of outside advisors (Julie, 2009). In countries such as Barbados, Suriname, Trinidad, Malaysia, and Tobago, men have access to a better support system, because of their longer experience in the business arena, and strength of their network ties (Carol, 2001). Moreover, men enjoy a clear advantage with respect to accessing credit and investment capital, and acquiring market information, which together facilitate their entry into more profitable, high growth sectors in these countries (Carol, 2001; Abdul, Kamarulzaman, Abdullah, & Ahmad, 2009).

Many scholars revealed that women are less likely to become entrepreneurs because they lack of entrepreneurial resources and lack of support from their social networks (Klyver & Grant, 2010). Women-owned businesses in many countries have been found to be smaller, earning lower sales and profit, and poor compared to their male counterpart (Robinson & Hans, 2009; Sharon & Stephen, 2004). Although, new small business firms usually have limited resources and lack of contacts with external parties, and it is difficult for them to develop or launch new core business without external intervention (Wilso & Kevin, 2010). Moreover, some findings indicate that women have been found to be more dependent and greater concern for others, while men have been characterized as more independent (Matthew & Robert, 2009).

Women Have a Less Diverse Network

According to the empirical research studies with regard to women entrepreneurs' networking, there is an evidence that women entrepreneurs have less diverse networks (Foss, 2010; Batjargal, Hitt, Webb, Arregle, & Miller, 2009). Research on entrepreneurs' social networks reveals that men and women develop social networks that are structurally different, for example, female entrepreneurs' social networks typically comprise a larger proportion of women and a smaller proportion of men than do male entrepreneurs' networks (Aldrich, Reese, & Dubini, 1989; Batjargal et al., 2009). Furthermore, the social support literature specifies that women

are more likely to seek and provide emotional social support whereas men are more likely to seek and provide instrumental (e.g., informational) social support (Batjargal et al., 2009; Garcia & Carter, 2009; Roomi, 2009). Concluding of many research findings to the entrepreneurship literature suggest that male entrepreneurs' social networks may be more likely to include individuals who can provide business advice, particularly with respect to entrepreneurship, weak ties are the source of men's success, strong ties are women's drawback, and women are inherently relational (Roomi, 2009; Foss, 2010; Batjargal et al., 2009). As far as concern about women networks, women tend to include a higher proportion of family members in their networks and thus a lower proportion of fewer business contacts (Batjargal et al., 2009; Roomi, 2009).

Several studies have shown that women tend to nominate more kin as people with whom they "discuss important matters" (Arent & Janet, 2003; Moore, 1990; Klyver, 2011; Watson, 2011; Arent & Janet, 2003). Women's networks have a significant amount of less wealthy, less powerful, and less respected actors (D'Exelle & Holvoet, 2011) and often, women's networks are composed of many family members and close friends (D'Exelle & Holvoet, 2011). In addition, research has shown that women's non-kin networks are often more restricted and tend to be more homogeneous with regard to wealth, education, marital, and work status than men's non-kin networks (D'Exelle & Holvoet, 2011; Batjargal et al., 2009).

Women Are Disadvantaged Compared to Men and Therefore Cannot Network Effectively

Women are disadvantaged compared to men and therefore cannot network effectively (Foss, 2010) and have more difficulties in gaining access to those networks (specifically traditionally dominated by men) which may provide resources needed for the creation and growth of their firms (Tsuchiya, 2010; Batjargal et al., 2009). This may be due, to the fact that women's previous employment experience does not always provide frequent interaction with, those individuals that control critical resources (Tsuchiya, 2010). As Moore (1990) observed, women usually have less central positions within, their networks and use them as discussion boards rather than for resource acquisition.

Most women entrepreneurs operate on a small scale, and are generally not members of professional organizations or part of other networks in Asian countries (UNESCAP, 2005; Tules, 2009). Most existing networks are male dominated and sometimes not particularly welcome to women but prefer to be exclusive (Premaratna, 2001; Thrikawela, 2011). Even when a woman does venture into these networks, her task is often difficult because most network activities take place after regular working hours. Lack of networks also returns women's awareness and exposure to good role models. Few women are invited to join trade of missions or delegations, due to the combined invisibility of women-dominated sectors or subsectors and of women as individuals within any given sector. As an example of this, at small and medium enterprises trade fair among south Asian countries held in Sri Lanka in 2004 where it has been estimated than women operate around half of all SMEs, less than 20 women were registered among the approximately 250 participants (UNESCAP, 2005). Information is the most important resource for women entrepreneurs. Because, information can relate to markets, suppliers, costs and technology, and networks have emerged as key strategy for giving support to women entrepreneurs. Networking is very important to the success of a business, and it is identified as one of the key ways to strengthen women's enterprises as it can provide access to information, new customers, and suppliers (UNESCAP, 2005; Mya, 2011).

In most of the Asian countries like Sri Lanka, women are viewed as weak, passive, obedient, or submissive. Furthermore, dominant religious beliefs and traditions do not favour women being involved in

outside activities. In some cases society has some stereotype such as weakness in a man if his wife is working in business. When women are involved in business activities, they have to deal with many interpersonal relationship, and sometimes travel away from their homes and participate in business parties like cocktail. Such things are not well accepted by Asian societies (Ranasingha, 2009; UNESCAP, 2005; Surangi, 2010).

Networks are a main focus for the study of women's equality. Men's networks are different from women's in some key respects (Miller, Besser, & Riibe, 2007; McCline, 2012; D'Exelle & Holvoet, 2011; Bierema, 2005). Given that society creates a sharp divide between work and family domains, assigns responsibility for family to women and privileges the work domain, men's network advantage is not surprising (D'Exelle & Holvoet, 2011; Bierema, 2005). Yet in the small business context, where borders between work and family are relatively fluid, women's greater responsibility for family and community may produce network strengths as well as network limits (Godquin & Quisumbing, 2008; Ncube & Wasburn, 2010; Durbin, 2011).

Women Are More Likely to Network With Men

Some studies propose that both men and women are more likely to network with people of their own sex (Garcia & Carter, 2009; Belliveau, 2005); while others find that the networks of both men and women tend to consist mostly of men (Aldrich et al., 1989; Shaw et al., 2008). The worth of all female networking for a female business owner might be more useful in the early stages of the firm's venture set-up (Garcia & Carter, 2009) providing models of reference (Roomi, 2009) and giving solutions to the specific problems challenged by women such as work-family conflict or lack of legitimacy (Roomi, 2009). However, the value of these networks as the single source of networking reduces considerably with the growth and development of the business. It has been shown that men and women occupy different positions in social structures, with men holding positions of higher status and fewer family responsibilities (D'Exelle & Holvoet, 2011; Batjargal et al., 2009). This can be of greater support in gathering information and resources during business start-up, and in providing important sources of ongoing referrals (Roomi, 2009; Foss, 2010; Klyver & Grant, 2010). Therefore, in the literature, women may be more expected to contact men for information and tangible support because they are perceived as higher status individuals who are in a better position to provide access to resources.

Women Favor "Strong Ties"

As far as concern women networks, several studies highlight that women favor "strong ties" in their networking behaviour (Klyver & Grant, 2010). That is, women business owners have been revealed to organize their networks around the family and social spheres and, therefore, are in more contact with family members, mainly with their partners and friends than acquaintances with whom they have only employment relationships (Aldrich et al., 1989). It is worthy to identify that why women are more likely to seek "strong ties" than "weak ties". Some research findings argue that, women may have more need of the benefits offered by "strong ties", such as trust, reciprocity and, credibility in an uncertain environment (Batjargal et al., 2009; Smeltzer & Fann, 1989). Emotional support is one of the resources most often provided by the key supporters. However, as emotional support is a resource mainly related with women, it is frequently viewed as lacking the value of other types of capital and is often excluded from business network studies. For women, "strong ties" may be more instrumental, since these relationships mitigate the effects of interpersonal difference (Smeltzer & Fann, 1989)

and attributed preconceptions (expectations based on gender) that are more expanded in superficial relationships. Another reason, according to Smeltzer and Fann (1989) and Garcia and Carter (2009), is that men and women adjust to the expectations regarding the proper styles of interaction related to their gender, men are expected to accept a transactional approach which highlights the importance of establishing the ties needed for the requirements of the tasks, and women are expected to be worried by the quality of interpersonal relationships and, therefore, look for "strong ties". Concluding of many research findings to the entrepreneurship literature suggest that male entrepreneurs' social networks that may be more likely to include individuals who can provide business advice, particularly with respect to entrepreneurship, weak ties are the source of men's success, strong ties are women's drawback, and women are inherently relational (Roomi, 2009; Foss, 2010; Batjargal et al., 2009).

Women Network Size Is Small

With regard to network size, some scholars point out that, the sizes of men's and women's networks vary little, but that differences do exist within groups of men and women (Santos, 2009; D'Exelle & Holvoet, 2011; Arent & Janet, 2003). Interestingly, studies indicate that intragroup differences may often be recognized to life-cycle effects, which are highly gendered (D'Exelle & Holvoet, 2011). For example, Moore (1990) found that for women there is a decline in network size at childbearing age, when the burden of reproductive activities is particularly high. Arent and Janet (2003) similarly validated that young children constrain the networks of their parents, particularly their mothers, through increased time demands. Furthermore, Moore (1990) revealed that at later ages women's networks again expand, whereas those of men decline. In Nicaragua, poverty and limited freedom of movement of women entrepreneurs explain differences in the sizes of men and women's ego-networks, and it can be seen a differential influence of these variables on men's and women's network sizes (D'Exelle & Holvoet, 2011). In contrary, as women entrepreneurs develop larger networks, their networks can hinder venture growth because the costs of building and maintaining wide networks can exceed the benefits obtained from them and the time taken to build and continue networks could have been spent in actions to grow the firm (Batjargal et al., 2009). Furthermore, the network density of male friendship ties is much higher than those among women and men in comparison with women, tend to have larger ego-networks of friendship and neighbor relation.

Deficiency of Existing Research and Future Prospect

Through collecting and analyzing of research content of entrepreneurial network in last 12 years, the paper holds that the following deficiencies still exist in the research of women entrepreneurial network, and this is also the future research. Firstly, the research on entrepreneurial network lacks of core theories. According to the collation of network research in entrepreneurial field, secondly, researchers asked only for the content of each social relation rather than fully explored information and they gave more attention on structural dimension of networks. Structural properties researched mainly include constructs related to the location of actors within the network relative to one another. The main relationships that have been investigated under this perspective comprise the network centrality, size of a focal actor's network, network density, and the relative strength of ties (Prajapati & Biswas, 2011; Gulati, 1998; Sullivan & Marval, 2011). Thirdly, while many studies described the benefits of networking for start-up businesses (Anna et al., 2012; Klapper, 2008), considerably, few researchers focused on factors required to be an effective networker and how do entrepreneurial firms shift

from inherited path dependencies over life-cycle. The building and developing network relationship is affected by various factors. However, scholars were not able to collate these factors systematically yet. According to the empirical evidence, the effect factors of entrepreneurial network mainly focus culture characteristic, industry characteristic, entrepreneur characteristic etc. (Biao et al., 2010). Fourthly, there were methodological biases and limitations as many studies were quantitative and not exploring in-depth the inner feelings, attitudes, and behavior of women research participants and quantitative data can only offer partial insights into networking behaviour. Finally the research on interaction mechanism between entrepreneurial network and entrepreneurial activity is insufficient.

For future research, it is now recognized that to broaden our understanding about networks more qualitative and longitudinal work is required that examines transformation and the change processes of networks; how they emerge and develop over time. More preciously, time has come to explore more the “entrepreneurial or networking part of the process not just outcomes and researchers” and by answering question like “What is entrepreneurial networking about the processes leading to outcomes?”. Furthermore, this paper suggests for future research to develop new knowledge of entrepreneurial networking related to questions like who? what? where? when? and why? by focusing on women entrepreneurs and moving away from nascent entrepreneurs.

Conclusions

In summary, despite the research attention on entrepreneurial networking in recent years, prior work has tended to focus on how actors connect (structural dimension), however, there is a lack of research about the resources, actors can potentially gain access to by examining with whom they connect and what resource they have (relational dimension). Therefore, while the study of the structural dimension of networks has been found to disclose variations between male and female business owners, there is still a lack of research into the relational dimension of networks which may uncover differences in resource mobilization. Moreover, few studies have acknowledged the impact of gender on networking experiences (Garcia & Carter, 2009). To date, researchers focus on study of gender differences in entrepreneurial networking (Klyver & Grant, 2010; Batjargal et al., 2009; Miller, Besser, & Riibe, 2007; D’Exelle & Holvoet, 2011; Foss, 2010; Garcia & Carter, 2009), but very little research has been conducted specifically focus on women (Sappleton, 2009; Roomi, 2009; Tsuchiya, 2010). In addition, it can be clearly seen that quantitative research is dominant in networking literature. In all respect, this research is a preliminary step towards filling this academic gap. In addition, the controversial evidence of women entrepreneurial networking identified by the academic literature and the shortcomings of the existing research in women entrepreneurs’ networks provide compelling reasons for further research on women entrepreneurs’ networks in entrepreneurship in a transition context.

This paper makes use of discourse analysis as a research method and theoretically, the discourse is limited by the lack of an explicit “gendered” perspective. Furthermore it identifies in a broader literature the hegemonic statements with regard to women and networks in entrepreneurship, namely, women businesses have higher discontinuance rates and one suggested reason for this problem is that women lack of networking, women have a less diverse network, women are disadvantaged compared to men and therefore cannot network effectively, women are more likely to network with men, women favor “strong ties”, and women network size is small.

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Comparison of Organic Sector Development in Six Balkan Countries*

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The study elaborates and examines a method for evaluation of organic farming development according to 10 indicators estimated by experts' opinion. It could be used for making comparisons in different countries, regions, or even time periods on the basis of the 10 main indicators determined considering organic operators, organic area, organic production, organic farms' structure, resources, access to market, institutional support, education and training, science and technology, environmental protection, each one of them including sub-indicators. The proposed organic development index (ODI) could be used as a complex indicator for organic sector development embracing different and very significant aspects rather than only nowadays used organic area, percentage, sales, etc. collected data for which are still questionable and difficult. The method was put into practice for six Balkan countries (Bulgaria, Serbia, Montenegro, Bosnia and Herzegovina, Turkey, and Romania). The calculations of ODI show very low results—not well developed and competitive sector suffering the interference of international open markets. Turkey, Bulgaria, and Romania perform better while Western Balkan countries (Serbia, Montenegro, and Bosnia and Herzegovina) are still at the beginning of organic sector development.

Keywords: organic farming, organic indicators, organic development index (ODI), organic data, sustainable development, sustainable agriculture

Introduction

From its advent as a way of thinking and agricultural practice at the beginning of the 20th century organic farming has been expanding and embracing more and more countries and areas. Last years' sector growth is assessed as permanent and stable. Organic agriculture follows world-wide accepted principles which are transformed according to local economic, geoclimatic and cultural characteristics. Application of specific standards, control, and labeling scheme is characteristic for organic agriculture and processing. Many countries have official policies for organic sector development. The questions—what the real development is in each one country and how to monitor trends are still open.

Organic production is a production method which in the greatest extent puts the accent on environmental protection, health, and safety. That way which appears to be the right and the most direct way for a farm/plant to respond to all legislative requirements in those fields. On the other hand, the organic sector proves to be one

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with the biggest potentials for achievement of sustainable economic and social growth, as well as for supporting rural areas development.

The key difference between intensive agriculture and organic farming turns to be that the first one is oriented towards world market while the second one towards ecosystems. A commonly accepted notion is that one of the indicators of society viability and sustainability is the food system's long term health impact in which sustainable agriculture is of particular importance.

The organic sector in the EU has been rapidly developing during the past years. According to EUROSTAT data, the EU-27 had in 2011 a total area of 9.6 million hectares cultivated as organic, up from 5.7 million in 2002. The whole organic area represents only 5.4% of total utilized agricultural area in Europe (Facts and Figures on Organic Agriculture in the European Union, 2013).

Despite the continuous growth of the organic market in Europe, in most countries only very basic statistics about this sector exist. Individual country governments collect data which are published nationally and by EUROSTAT (the statistical office of the European Union), on the number of certified organic holdings, organic and in-conversion land areas and livestock numbers. Important market statistics, however, such as the amount of production, consumption, retail sales, international trade and prices at the farm or consumer level are lacking in most European countries (Gerrard, Vieweger, & Padel, 2012).

The collected statistics actually cover the following data: the number of operators such as producers (agricultural holdings, aquaculture production units), processors, importers, exporters, and other operators (wholesalers, retailers, etc.); crop area under organic production (fully converted area) and under conversion; organic crop production (production from fully converted area); number of organic livestock and aquaculture production; organic products of animal origin; number of operators processing products issued from organic farming (based on NACE classification). An indicator is calculated to provide information on the share of organic area in the total utilized agricultural area. The data on the total area are provided by crop production statistics (statistics of land use). The indicator is one of the "Sustainable Development Indicators" (European Commission, EUROSTAT, 2013).

Due to insufficient data on certain aspects of organic production and of the organic food chain (in particular sales and trade) a complete picture of the sector is at this point in time unavailable. A number of initiatives are currently ongoing with a view to improve data collection on organic farming, but comprehensive official statistics remain necessary for any future review of this sector in the EU (Facts and Figures on Organic Agriculture in the European Union, 2013).

The market data collection effort remains very varied across Europe and not all data that are collected and also published. This is problematic, as without good quality, accurate, and timely information it is difficult for stakeholders to make decisions about the risks and benefits of investment (Gerrard et al., 2012).

The question of data availability, sources and estimation at all the levels of organic supply chain is one of the most important. Providing the lack of comparable data for all the countries it is difficult to make assessments and comparisons in organic sector development. The differences in the purposes in data collections make hard reliable estimations of organic sector development, as well as the monitoring of trends.

This study suggests a method of comparison of organic sector development in different countries, regions, or even time periods. The method was applied in a round table discussion of experts in the field in which

assessments were made for six Balkan countries.

In the Balkans, with the exception of Croatia, organic farming is far from developed and its production is mainly destined for export. In many countries the relevant laws are recent, or as yet to be consolidated, and public support is low or just starting to emerge. The consumers' buying power is limited, as the national market is still disconnected, disorganized, and often inefficient (Vittuari, 2011).

Balkan countries do not stay aside of European organic sector policy and legislation development but they are still far away from sustainable production.

The increase in both the number and type of the organizations involved—from public institutions to local and foreign NGOs, associations, producers, and intermediaries—and the growing number of consumers—are all evidence of the sector's promising development, not only because of the favorable climatic conditions, but also because of the interest expressed by many stakeholders working in the food and agriculture chains of production (Vittuari, 2011).

The method used in this study points the small differences between examined indicators in the six countries which in fact have a greater impact on organic sector development as a whole.

Materials and Methods

The study proposes a method of comparison of organic sector development according to 10 indicators estimated by experts' opinion. The indicators chosen for evaluations are: organic operators (with 10 sub-indicators), organic area (with five sub-indicators), organic production (with five sub-indicators), organic farms' structure (with five sub-indicators), resources (with five sub-indicators), access to market (with 10 sub-indicators), institutional support (with 10 sub-indicators), education and training (with five sub-indicators), science and technology (with five sub-indicators), environmental protection (with five sub-indicators). Evaluations are made by the scale from zero to five. Experts' evaluations were collected for the six Balkan countries in a round-table discussion about organic sector development on the Balkans which was organized in November 2013 (see Table 1). Calculations for the 10 indicators are made as the averages of the points of sub-indicators in every indicator. In addition, a calculation of an organic development index (ODI) was made as an average of the 10 indicators (see Table 2).

The study proposes the following assessments of ODI results:

- 0.00-2.00: Organic sector is not well-developed and competitive;
- 2.01-3.00: Organic sector is developing but still unstable and risky;
- 3.01-4.00: Specific fields need special attention for improvement;
- 4.01-5.00: Organic sector is well-developed.

Results and Discussions

The study elaborated a method and examined organic sector development in six Balkan countries. The method provides tools to analyze organic sector development in each one of the countries separately, as well as to make comparisons. The results from the experts round table discussion which first tested the method are presented below. Table 1 shows the results for the six examined countries for the sub-indicators analyzed.

Table 1

Experts' Evaluations for the Examined Countries According to the Elaborated Method

No.	Indicators	Bulgaria					Serbia					Montenegro					Bosnia and Herzegovina					Turkey					Romania				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1	Operators																														
1.1	Agricultural producers (only organic produce)			●			●																	●					●		
1.2	Agricultural holdings (only organic produce)	●																					●					●			
1.3	Processors (only organic produce)	●																					●				●				
1.4	Importers (only organic produce)		●				●					●					●						●					●			
1.5	Exporters (only organic produce)		●																				●				●				
1.6	Wholesalers (only organic produce)	●																					●				●				
1.7	Retailers (only organic produce)	●																					●								
1.8	Producers of both organic and conventional organic products		●				●					●					●							●					●		
1.9	Processors of both organic and conventional products	●					●					●					●						●					●			
1.10	Traders of both organic and conventional products			●				●					●					●						●					●		
2	Organic areas																														
2.1	In comparison to total agricultural land	●					●					●					●						●					●			
2.2	In comparison to total utilized agricultural land	●																				●					●				
2.3	Certified organic area compared to population density	●																				●					●				
2.4	Area in conversion comparer to population density	●																				●					●				
2.5	Organic animals compared to population density	●																				●					●				
3	Organic production																														
3.1	Size		●				●					●					●						●					●			
3.2	Products variety			●			●					●					●							●					●		
3.3	Inner market for local produce	●					●					●					●					●					●				
3.4	Export		●																				●					●			
3.5	Import		●				●					●					●					●						●			
4	Organic farms' structure																														
4.1	Agricultural producers/holding proportion	●																				●					●				
4.2	Organic farms' size—area	●																				●					●				
4.3	Organic farm's size—staff	●																					●					●			
4.4	Regional distribution	●					●					●					●						●					●			
4.5	Product variety			●																				●					●		
5	Resources																														
5.1	Investments	●					●					●					●							●				●			
5.2	Facilities and equipment	●																						●				●			
5.3	Supporting productions	●																					●					●			
5.4	Suppliers	●																					●					●			
5.5	Human resources	●																				●					●				

(Table 1 continued)

No.	Indicators	Bulgaria					Serbia					Montenegro					Bosnia and Herzegovina					Turkey					Romania				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
6	Access to market																														
6.1	Direct sales	●					●					●					●						●					●			
6.2	Sales to processors	●																					●					●			
6.3	Sales to traders	●																					●					●			
6.4	Sales to state institutions																					●					●				
6.5	Sales in tourism and other sectors																						●				●				
6.6	Farm price/Market price proportion	●																					●				●				
6.7	Consumers trust	●					●					●					●							●				●			
6.8	Inner market sales						●					●												●				●			
6.9	Outer markets sales		●																					●				●			
6.10	Market associations																						●				●				
7	Institutional support																														
7.1	Legislation			●				●					●					●						●					●		
7.2	State institutions	●																					●				●				
7.3	Local authorities																						●				●				
7.4	Certification companies			●			●					●					●							●					●		
7.5	Producers associations	●																					●					●			
7.6	Processors associations																						●				●				
7.7	Traders associations	●																					●				●				
7.8	Consumers associations	●																					●				●				
7.9	Non-governmental organizations	●																					●					●			
7.10	Farmers-consumers associations																														
8	Education and training in the field of organic production and environmental protection																														
8.1	Kinder gardens																					●						●			
8.2	Primary schools																					●						●			
8.3	Secondary schools						●															●						●			
8.4	Higher education institutions	●					●					●					●					●						●			
8.5	Vocational training	●																				●						●			
9	Science and technology																														
9.1	Scientific research centers and institutes	●					●					●					●						●				●				
9.2	Projects			●			●					●					●							●				●			
9.3	Extended services		●				●					●					●						●				●				
9.4	Proinnovation infrastructure	●					●					●					●							●			●				
9.5	Patents, licenses, etc.	●					●					●					●						●				●				
10	Environmental protection																														
10.1	Water			●				●						●				●						●				●			
10.2	Soil			●				●					●					●						●				●			
10.3	Biodiversity				●				●					●				●						●				●			
10.4	Landscape			●				●						●				●						●				●			
10.5	Air		●					●					●					●						●				●			

The calculations made on the basis of the results of sub-indicators' assessments are summarized in Table 2, as well as the calculated ODI for the six countries according to the materials and methods described above.

Table 2

Calculations of the 10 Indicators and ODI

No.	Indicators	Bulgaria	Serbia	Montenegro	Bosnia and Herzegovina	Turkey	Romania
1	Organic operators	1.7	0.6	0.5	0.5	2.3	1.9
2	Organic area	1.0	0.2	0.2	0.2	1.2	1.2
3	Organic production	2.0	0.8	0.8	0.8	1.8	2.0
4	Organic farms' structure	1.4	0.2	0.2	0.2	1.8	1.8
5	Resources	1.0	0.2	0.2	0.2	2.2	1.8
6	Access to market	0.7	0.3	0.3	0.3	2.2	1.6
7	Institutional support	1.1	0.3	0.3	0.3	2.0	1.5
8	Education and training in organic agriculture and environmental protection	0.4	0.4	0.2	0.2	1.0	1.0
9	Science and technology in organic sector	1.6	1.0	1.0	1.0	2.4	1.2
10	Environmental protection	3.0	2.2	2.6	2.0	3.0	2.0
	ODI	1.39	0.62	0.63	0.57	1.99	1.60

In order to make the analyses easier, the data were presented in separate figures for every one of the examined countries and as a figure for ODI as presented below.

The results for Bulgaria show the highest values for the following indicators examined: environmental protection (3.0), organic production (2.0), organic operators (1.7), science and technology in organic sector (1.6) but still at very low levels. Bulgaria is a country with developing organic sector which is experiencing main problems in education and training in organic agriculture (0.4) (see Table 2 and Figure 1). Despite the great number of projects in universities and institutes in the field of organic farming technology, management and training, the transfer of knowledge and innovation is too low. On the other side is the difficult access to market (0.7) and the export orientation of organic produce.

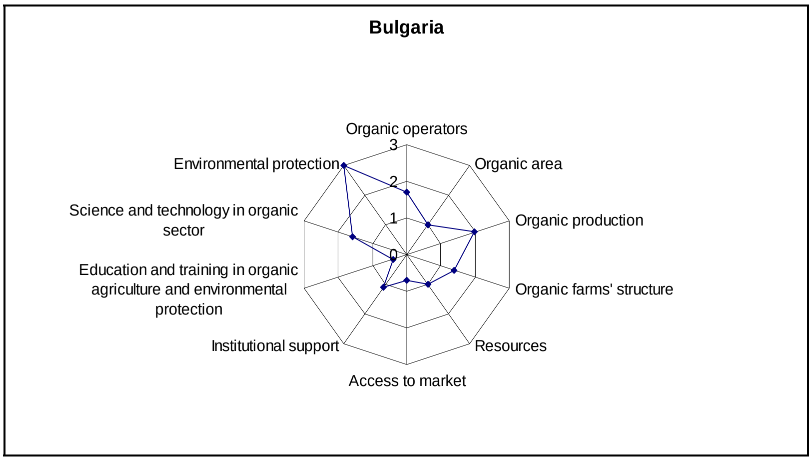

Figure 1. Organic sector development indicators for Bulgaria.

Western Balkan countries—Serbia, Montenegro, and Bosnia and Herzegovina, being a part of the Former Yugoslavia before, show very similar and very low assessments for organic sector development (see Table 2, Figures 2, 3, and 4), showing highest levels for environmental protection (2.2, 2.6, and 2.0, respectively) although still low. The results for “science and technology in organic sector” (1.0) are higher in comparison to other too but very low according to the scale used in the method.

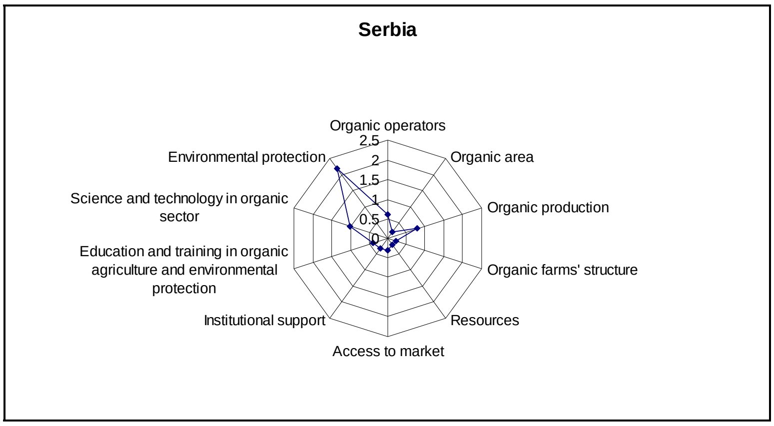

Figure 2. Organic sector development indicators for Serbia.

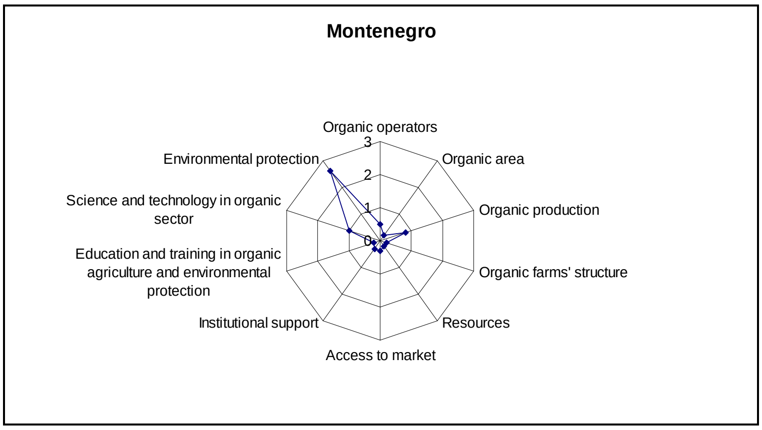

Figure 3. Organic sector development indicators for Montenegro.

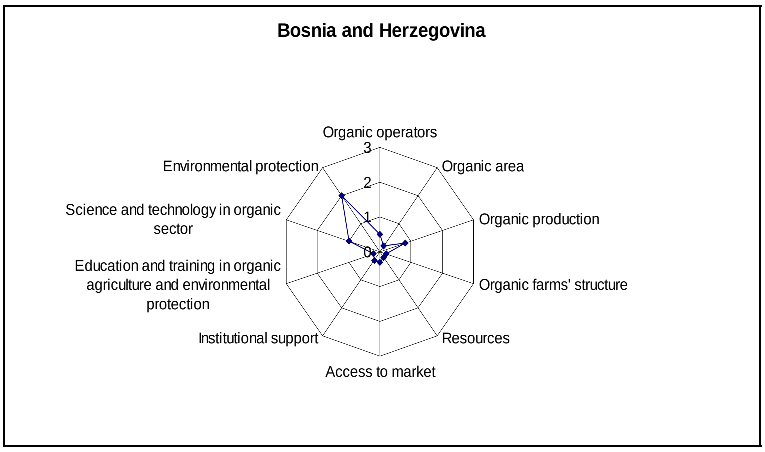

Figure 4. Organic sector development indicators for Bosnia and Herzegovina.

Turkey as a fast developing country in last years shows better results in comparison to other examined countries but still education and training is the weakest point (1.0) (see Table 2 and Figure 5). The same is the assessment conclusion and for Romania (see Table 2 and Figure 6) according to the experts' evaluations. However Romania's results are lower than Turkey's.

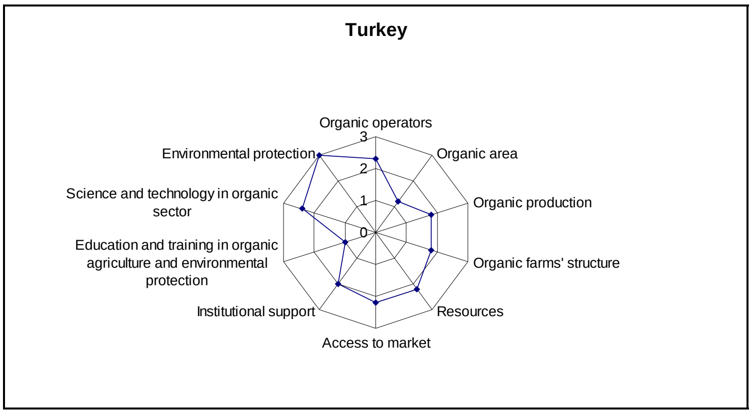

Figure 5. Organic sector development indicators for Turkey.

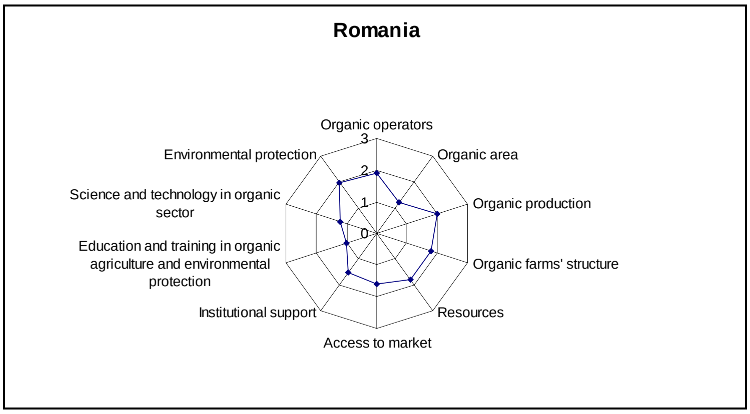

Figure 6. Organic sector development indicators for Romania.

Organic sector development is slow in examined countries. Turkey, Bulgaria, and Romania perform better (ODI 1.99, 1.39, and 1.60, respectively) while Western Balkan countries (Serbia, Montenegro, and Bosnia and Herzegovina) are still at the beginning of organic sector development (ODI 0.62, 0.63, and 0.57, respectively) (see Table 2 and Figure 7). The calculations of ODI show very low results as a whole—not well developed and competitive sector suffering the interference of international open markets.

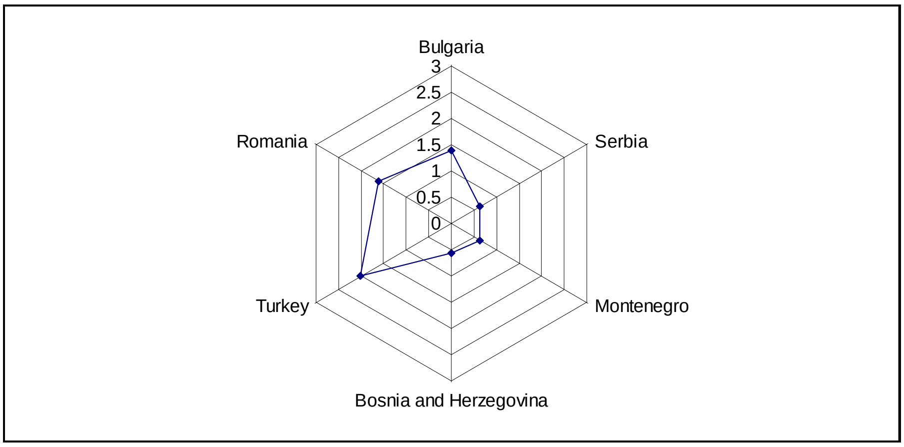

Figure 7. ODI.

A check up of the results was made by collecting data about organic area, share of total agricultural land and number of producers (see Table 3) (Willer & Lernoud, 2013). That has a very good correlation with the results showing the feasibility of the elaborated method embracing not only the indicators of quantity but also including qualitative assessments too.

Table 3

Organic Sector Data for the Six Countries

Indicators	Bulgaria	Serbia	Montenegro	Bosnia and Herzegovina	Turkey	Romania
Area (ha)	25,022	6,238	3,068	343	442,582	229,946
Share of total agricultural land (%)	0.8	0.1	0.6	0.0	1.8	1.7
Number of producers	978	177	62	25	43,716	9,471

Note. Source: Willer & Lernoud (2013).

Conclusions

The elaborated method takes into consideration the notion that changing to sustainable agriculture also implies necessary changes in behavior of the whole value chain (Best Practice Guideline for Agriculture and Value Chains, 2013). It proposes a simple tool for evaluations and comparisons of organic sector development. The proposed ODI is in fact a kind of a sustainable development indicator.

The low levels of the results for all the proposed indicators and calculated ODI underline the importance of setting up governmetal policies and strategies based on an integrated approach for encouragement of organic sector development in each country on national and local level, as well as on the international level for the Balkan region still suffering the consequences of the transition period in national economies and lagging behind other European countries. In conditions of instability and search for sustainability, organic production is one of the sectors needing special attention of state and local authorities, as well as of civil society bearing in mind that it provides opportunities to achieve the goals of sustainable development and assuring food quality and safety.

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Digital Economy—Economy of the New Millennium

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The new digital technologies allow access, storage, and transmission of information increasingly easier and more accessible, so we deal with digital information that can be converted into new economic and social values, creating huge opportunities for developing new products and services. In these conditions we can say that the information is the key resource for the new type of economy—digital economy. The new economy is characterized by the increasing incorporation of knowledge in new products and services, growing the importance of learning and innovation, globalization and sustainable development. In this paper we propose to address this new type of economy, highlighting specific features and main components. Because the digital economy is characterized by a series of procedures that fundamentally changes the relationship between business partners and taxpayers, by introducing a coherent way of cultivating civic awareness, we considered it appropriate to give an overview of them. In view of the global character of this type of economy, we have presented some aspects of the digital economy in the European Union, considering that it could be a possible solution to the economic crisis, issue of new economy based on digital economy, being analyzed in its various aspects by many political factors and various institutions and international organizations. We ended by presenting the most significant trends in the digital economy and a set of conclusions, in which is pointed the role and the importance of this new type of economy.

Keywords: digital technologies, new economy, knowledge, globalization, information

Introduction

Broad use of information and communication technologies and the need to move to the Informational Society and to the society based on knowledge ensure economy growth under conditions of increased environmental protection, accelerating the reduction of physical consumption in favor of information and knowledge capitalization, moving the center of gravity of the investments in fixed assets, to investments in human capital. It goes without saying, so that the Information Society is integrating sustainable development objects, based on social rights and equal opportunities, freedom, cultural diversity and innovative development ecological protection, restructuring of industry and business.

Feature of the organization in the digital economy will be replacing of traditional pyramid hierarchy with a horizontal hierarchy. At the managerial level a development of the decision-making procedures will be registered by optimizing creativity, capacity for innovation and intellectual training of subordinates.

Teamwork, collaboration, and cooperation among employees will lead to generations change in

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management. Competitiveness of the organization will depend almost on the ability to shift from hierarchical and individual character to workplace, to promote collaborative work, leading to a new relationship of proportionality between individualism and solidarity—two major features of contemporary society.

Individual initiative, solidarity, cooperation, and mutual trust in the workplace are key factors for success in the informational society. The digital economy is citizen oriented, so we have a new orientation from the subservient citizen of the institutions, toward the one who has services available to him, who pays taxes to obtain facilities and to know how public money is spent. The digital economy has dynamic facts which correspond to structural updates and in information plan.

The Characteristics of Digital Economy

The concept of digital economy refers specifically to the current transformation of economic activities as a result of using digital technologies, which ensure the access, processing, and storing information in a way to be more cheaper and easier. The new economy is characterized by increased incorporation of knowledge in new products and services, increasing the importance of learning and innovation, globalization, and sustainable development.

The significant volume of information is changing the way markets work, enabling enterprise restructuring and the emergence of new opportunities for creating value from information available.

This new type of economy, as a result of interaction among computer, telecommunications, Internet, and electronic, is characterized by several features that set it apart from traditional economy (Kenawy & Abd-El Ghany, 2012):

- Creating a new business model (e-business, e-commerce, e-banking, etc.)—radically changes their efficiency, in order to reduce costs, including transaction;
- Placing in the center of attention, the demand, the consumer needs, the consumer that is involved in a increasingly higher measure in designing, implementation, and use of goods and services, starting from the stage of research and development. So, new economy has an interactive, participative feature, increasing the consumer role which can become an important source of innovative ideas for the manufacturer;
- Competition and cooperation are two inseparable sides of the digital economy;
- Requiring a higher consumption of design work, high level creates a high added value, new jobs, segments that are unlimited business opportunities and creativity by the existence of flexible and interconnected standards which facilitates the need to integrate and/or individualization of different consumers.

In conclusion, we might say that the new type of economy is required increasingly more due to its economic effects and the reduction of resource consumption, the increase of innovative and entrepreneurial spirit, the increase of productivity work, speed production and the change of economic events and processes, increasing value added.

If any market economy to become operational must meet minimum requirements, so, an economy to be in the category digital economy must also be registered with a number of features, presenting a particular importance, the availability to quantify, manifested by state's authorities, to know exactly the real available resources, and especially to direct financial resources to the defining operational digital economy:

- The existence of large numbers of networked computers which may exist in state companies, in private companies, in administration, shops, banks, schools, especially in homes and particularly at street corners, railway stations and elsewhere where man wants to solve a problem;

- Operationality of general interest database. The existence of a correct and complete database is the starting point for a true digital economy, but is necessary an update of its in real time, as there is a new development of a phenomenon, a new stage of an individual journey and a process of achieving interoperability of computer applications to access databases from other systems considered until now included. The existence of a complex system of national databases must be characterized by controlling the level of redundancy and flexible ways of retrievals, customer oriented and characterized by satisfaction of applicants, in relation to the application;
- The existence of a strong contingent of IT who implement applications made by others, but who, taking into account to the specificity of the Romanian economy, firstly to develop a strategy for information society development, then, step by step, to proceed with implementation of this strategy in life. Huge amount of problems which must be solved requires not only the specialization of designers but also the elimination of redundancies (Malecki & Moriset, 2007, p. 87). Transparency that accompanies all stages of development of information society is meant to orient clear training of labor to clear objectives which really means elements of social progress. Workforce is complex in structure as dynamic if we take into account the accelerated pace obsolescence of knowledge, computer technicians, and instruments. In a digital economy, there must be an optimal ratio between those who produce and develop IT applications, respectively, those who use, without causing distortions in the intermediation process by creating monopolies;
- Availability for investment effort of all actors in society. Using budgetary resources is created fundamental elements of national infrastructure, private investors and especially of the local citizens, accounting for the financing of projects tasks that come to complete a complex construction, multipurpose;
- The depolarization of society through access to people and performance by delivering complete and natural streams to micro-level. The society in which information has a peripheral role, has polarization as steady state, on the one side it is the few percent, billionaires, and on the other side at the other pole it is poor people, very poor, the middle class is insignificant. The digital economy is the economy based on knowledge in which the initiative and individual performance takes the place of engineering and legislative cracks. Complete flows are the only one which introduce a self control to subsystems levels of society with levers that regulate developments of these subsystems, pushing the corruption to the periphery, for real and healthy competition.

These features of the digital economy are built step by step, by decisions deriving from government programs, medium-term political decisions, with adjustments which ensure continuity and development especially, without replays from zero at each election cycle. It is the basic condition of modern information society's dynamic.

Digital Economy's Components

By using new digital technologies, information storage, their access and transmission is becoming easier and more accessible, leading to the creation of several opportunities for developing new products and services for digital economy. The digital economy requires the creation of new markets, new markets law, new patterns of behavior for both producers and for consumers, new types of money, new distribution networks. The components of digital economy are:

Internet infrastructure increases companies of the other three areas and can be called the backbone of the digital economy. At this level there are companies that activate to produce goods or services which form the Internet infrastructure:

- Telecommunication companies;

- Internet service providers;
- Suppliers of network equipment and related services;
- Providers' servers and hardware companies.

The applications of the digital economy infrastructure—at this level, are found organizations whose products and services enable optimal use of infrastructure, to make electronic transactions:

- Consultants;
- Applications for electronic commerce;
- Multimedia applications;
- Development of Web software;
- Software search engine;
- Training online;
- Web databases;
- Hosting sites and support services.

According to Nicoară (2004), intermediaries in the digital economy act as a catalyst in the process by which investment in infrastructure and applications are processed in transactions. While playing a major role to supplement the information and knowledge's required for the digital economy, intermediaries occupy a relatively small share in it, their incomes are not necessarily directly from transactions, but from advertising, charges, and commissions. Intermediaries include:

- Dealers on various types of activities;
- Online travel agencies;
- Online Brokers;
- Portals;
- Advertising brokers;
- Online advertising;
- Virtual Stores.

The on-line transactions include all categories of participants in the supply chain which carries out operations on-line:

- E-retailers—distribution of books, music, appliances, flowers etc.;
- Manufacturers that sell their products;
- Transportation service providers that sell tickets online;
- Online entertainment and professional services online;
- Shipping services.

Proceedings of the Digital Economy

To the digital economy is characteristic a series of procedures that fundamentally changes the relationship between business partners and contributors, introducing a coherent growing way of civic consciousness?

Internet auction procedure manages the database of bidders and the client database and the result of the adjudication is made public, together with all other alternatives. This procedure is completed with electronic payment of provider to the customer and partners coverage in the management of transactions automatically.

The procedure of using software for sending email messages with special significance is a simple but generous way to connect citizens to a minimum number of services.

Digital economy implies a new kind of citizen, who understands that he/she is an actor only if they operate directly in a complex system, as an inseparable part of its.

The procedure is aimed to use Internet resources for information. The citizen has access under reasonable conditions in terms of the costs at Internet resources. Each organization must have Internet address put on official documents headers, on buildings reported in the media, on business cards. People, who visit a site well constructed, find a natural ordering of information, also a natural use of keywords. A site is created for the target group which is not addressed and not to those who built it; it must contain complete and accurate information and find the methods that make the difference among items that have special importance, deadlines, admission terms, costs, and risks. Information must be honest and fair, not including traps or ambiguous elements or deliberately misleading. Between what is written on the site and what is on the ground, there must be a full accordance, the website must be certified.

The procedure is for storing a high volume of data as bar code and the repeated use of this information to perform database updates of making the sale or supply, respectively, to search after the correct code defined. Bar code is the first step of the great interconnections database being vital in the interaction of applications. Interaction becomes particularly effective when based on bar code more than two complex applications interact.

The procedure is to remove the paper support in daily life. For this direction is necessary and proper safety approaches in creating official databases and especially the definition of ways of adding items. Removing the paper support, assumes a clear evidence of input/output messages with limiting the ability of operators to operate on database. Computer applications that do not use the paper support should include with a special strictness, the history of operations and numerous ways of certifying ongoing operations. The elimination of paper leads to a new approach, increasing the responsibilities, doubled by the maximum reliability ensured especially to databases.

Another procedure concerns on the naturalization of flow merchandise/services-money/information-goods/services. As long as it is working with hybrids on payments through a mandate or a special account for online shops, the application is not for electronic commerce. Through appropriate mechanisms economic operators are incentive for developing Web pages and especially electronic commerce processes, respectively to provide products, prices, possibility receiving orders, delivery and especially the possibility of making electronic payments and receipts.

The procedure for creation income account and expenses account of the citizen is a specific goal only to digital economy. each citizen is associated with a complete construction in a database that registers all transactions (receipts, payments, transfers, movements, activities, donations, gifts) significant. The digital economy is a new approach to financial flows, which now is considered as banking secrecy, banking technique, taking on a new valence, whereas the existence of databases and access to complex chains, allows for analysis and providing hazardous or preferential—visibly diminishes credit hazardous.

The procedure is for the details of citizen hierarchy. The data on a citizen has a confidential feature in relation to a particular context, except when it goes to the marital status for filing the documents for marriage. Digital economy excludes free and abusive interpretations on transforming any information in confidential information, protecting the functioning market economy mechanisms effectively.

These procedures create a new economic environment, produce changes to competitiveness and the economic miracles already have ground of the productivity and product quality, as well as services processes.

If now we can talk about current e-tendering, e-administration, e-governmental, e-education, and e-university, the future will bring new and important changes that will deepen the digital character of the economy, making the economy to bear this name, called digital economy.

All these approaches are possible only when at the level of the economy the conditions were ripe and were made such connections that lead to such a direction and show that another approach is not possible.

Along with the development of typologies of e-business, mobile telephony is developed which is accompanied along a new way of communication, by the implementation of specific informatics applications, some mobile applications or m-applications. We can not speak about a digital economy if we can not connect to the database through m-applications, whatever they are.

The vulnerabilities embedded in mobile phones should be reduced to provide adequate protection for all transactions, so the technological explosion in the past years is associated permanently reliable solutions compared to maximize criterion of the protection.

The limitations given by the amount of information that is displayed on a mobile screen require the development of theories which structure optimal human-mobile interfaces to make operational this new type of interaction. The reliability of conception makes cell phone in a simple intermediary transmission of information to a laptop with opportunities to integrate of their applications in complex constructions, extremely elaborated.

Both the e- and m-applications are developed based on a single strategy, even if the approach is embodied by elements of simultaneously.

Unitary concept is primarily aiming at the elements interface with the ensuring of continuity, and then ensures the completion of several stages, rigor is provided mostly by the existence of a certification process.

In the context of the digital economy, a core is projected around which other applications are developed, which induces the compliance of the rules by all the other players, thereby obtaining a coherent structure of the entire construction.

Digital Economy in European Union

On the European continent, the authorities intend to encourage, in a sustained manner in the coming years, the development of the digital economy in the belief that it will raise about 110 billion euros (OECD, 2013). To enhance the digital economy we can act in different ways, the primary being the establishment of an economy of scale for service providers and liberalization of certain European citizens, which would be a true power train to achieve unique digital space, accessible from any European country.

The issue of the new economy, based on the digital economy, is analyzed in its various aspects by many political factors and by various institutions and international organizations (UN, PNUD, OECD, G7, G8, and others).

Any reference reports are based on the following main ideas, as signals of the digital economy:

- The digital revolution;
- The expansion of the Internet;
- E-commerce;
- The supply of goods and digital services;
- The electronic supply of tangible assets;
- Challenges for government/public sector and private sector.

The Digital Revolution

Digital economy involves intensive use of information technology in all sectors, especially in the internal operations of organizations (business, government, and non-profit) in transactions between organizations and individuals, acting both as consumers and organizations (Atkinson & McKay, 2007, p. 8). IT enables the collection and processes large volumes of information, stimulates innovation, which gives organizations greater opportunity and incentive to increase quality and efficiency. In this way, we can say that this is the main driver of the global economy. Digital economy has produced enormous benefits; the most important is that developed countries, even in developing countries should ensure appropriate policies and programs to implement digital transformation. To be successful in today's economy, people need knowledge and understanding of computer and Web skills. IT has increased considerably the ability to develop new business models, products and services, processes, and inventions.

Technologies that underpin the digital economy are not only personal computers and the Internet, which are incorporated into a wide range of mobile phones, PDAs, GPS units, MP3 players, and digital cameras, practical, which is found in consumer products daily, which is reflected in the products and services of high quality at lower prices.

U.S. leads in terms of investment in IT (hardware, software, and telecommunications), which grew faster than in other major OECD countries (Canada, France, Germany, Italy, Japan, and the UK). The use of IT has led to stronger productivity growth in developed countries, but also in some developing countries it has led to increased productivity (Malaysia and Thailand). In China, IT plays a key role in economic growth, contributing 38% to total productivity increase and a 21% increase in GDP (GT Briefing, 2013).

In the last years, the European Union economies were strongly marked by the existence of the digital economy, although it is difficult to measure the overall impact of IT on the economy, some facts are clear:

- Information technology industry has achieved a significant growth rate, providing one third of the economic growth achieved in the last years (without considering indirect effects);
- IT investment companies (from the total investment in equipment) have increased significantly;
- Rapid decrease of the prices of products and IT services have contribute to the loss of the annual inflation;
- IT industries were the main source of investment in research and development;
- EU economy, based on Internet services has increased, and there are several key factors that justify it: low priced of computers, fast Internet penetration, both in housing and in the enterprises, combined with entrepreneurship and risk in business and with the dynamic capital markets.

The Expansion of Internet

The Internet has become a true multi-billion dollar industry being a vital infrastructure for the global economy. At the end of 2011, almost all companies in OECD countries were connected to the Internet. Extending Internet connectivity was an oasis of fresh air for the information and communication technologies (ICT) sector during the crisis, showing an influence on revenue growth for top firms of 6% per annum between 2000 and 2011 and the increased production of 5%-10% in 2012 (OECD, 2013). Basically, the Internet reshapes the way people live, bringing a greater variety of goods and digital services, lower prices, improved data collection, several channels and social networks. Regarding firms, transition to digital technologies forced them to rethink their business models and constantly adapted to survive in a global market.

Policy makers from all governments are increasingly focusing on Internet and ICT policies, dependence

on them increases with the challenges of the global financial crisis, in this regard; governments seek new ways to implement online government services.

There are a number of factors that have led to changes in trade rules and competitiveness in a knowledge-based economy, where globalization and information and communication technology plays a central role. The main feature of the knowledge economy is continued expansion and employment growth in science and technology through the economy. Knowledge has become the main source of economic growth, improving the competitive advantage of companies in the economic system that moves from the abundance and size of the market, to increase elasticity and speed information.

It is important to note that information technology is not simply using the Internet, but allows the creation of modern tools to create, manipulate, organize, transmit, and store information in digital format.

The advances of technology made in the communications sector and of computers converge to the Internet, investments in information technology involves improving communications both within an organization and between organizations, between organizations or individuals:

- Internet rhythm adjustment overshadows all other technologies that preceded it;
- Customers of electronics companies, the media giants, the telephone companies, computer companies, software companies, cell phone companies and satellite manufacturers, cable television had invested heavily in Internet technologies;
- EU budget allocates a lot for investments in high performance computing and communications, of which an important share to ensure a research network faster than the current Internet is also provided investment for development of new network-support of some applications, which are telemedicine, distance learning, and collaborative work in real time;
- Population has opportunities to access to the Internet at speeds becoming higher.

Electronic commerce means the accepted "traditional" value-added use of applications such as electronic transfer of documents (EDI), of fax communication, bar codes, files transfer, and electronic mail. The extraordinary growth of the interconnectivity of computers in Internet in all segments of society, has led to a more obvious trend for companies to use these networks in the area of a new type of commerce, electronic commerce on the Internet, to appeal—besides the old services mentioned—new ones. This is, for example, the possibility to make purchases through network, by consulting electronic catalogs on Web and pay via credit card or electronic wallets.

The supply of goods and digital services—the software programs, newspapers, airline tickets, and CDs, not until recently was being sold in shops, kiosks or at home, now, are delivered electronically via Internet:

- Sales and marketing costs are much smaller, the growth of the potential for selection and convenience of customers led to the rapid growth of Internet use for entertainment, tourism, software distribution, banking, and insurances services;
- 90% of Web users get on-line news and information's for large utility (OECD 2013);
- The turnover for commercials broadcast via Internet has increased significantly in the last period;
- The sale of tickets, the reservation of hotels, tourist programs for holidays or weekend car rental services are provided on the Internet with a lot of success;
- Banks generalized online services offer to customers, the costs of an Internet banking transaction sharply, while offering customers new services;

- Billing and electronic payments had led to massive savings in the budget of the companies;
- IT has contributed to the acceleration of labor productivity, which shows high rate of return of investments in this area, although IT equipment depreciation period is very short. The results of many firms show that IT investments were more profitable as they were accompanied by investments in organizational changes and less effective in their absence.

The main issues for global digital services economy scale are based on the principle by which private sector should be the leader of this process, and governments should avoid the restrictions.

European authorities intend to encourage strong digital economy in Europe, with the conviction that this buoyant market will raise about 110 billion euros (OECD, 2013).

The increase of the digital economy may follow different paths for the achieving of a goal upward, the recipe relying mainly on the establishment of economies of scale for providers, ingredient to which is added the liberalization of certain services for European citizens.

A European Commission report (Europe 2020) on digital competitiveness is made stating that "Europe's digital sector has made great progress since 2005", thus that 56% of Europeans now regularly use the Internet (80% of them use high-speed connections) so "old continent" is the first continent truly "mobile" of world, the number of subscribers mobile communications services exceeds that of citizens (a level of 119%).

The Digital Economy—A Possible Solution to Economic Crisis

Although several years have passed, and affected the entire world economic crisis seems that never ends, basically, we are now at the confluence of two crises: the economic and climate change that takes by long-term business. The settlement and the minimalization of effects performed at microeconomic and macroeconomic level still remain a challenge for economists, both globally and nationally level, a possible solution being the development of the digital economy scale.

The digital economy is regarded as the top of economy in general because of its economic effects that are the reduction of resource consumption, the increase of innovator and entrepreneurial spirit, increase of labor productivity, of speed production and the change of economic phenomena and processes, the increase of the added value, etc.. In the new economy, a promoter of development is the digitization (using information technology to produce and distribute goods and services) and in particularly, the use of Internet and other information technologies (smart cards, voice-based computing, wireless, databases, telecommunications, and expert systems) in the service sector, which includes 80% of jobs.

The revolution of the information technology has transformed virtually all industries and is the main developer of the increase on the economic efficiency and productivity, of living standards, of the personalization of products and services to respond to individual needs and desires. It made almost a fundamental change and transformation of the processes of economy based almost exclusively on physical resources in a predominantly knowledge-based economy.

Noting the evolution of the digital economy, we see more and more pronounced a development of knowledge's, as a raw material of economic activity, so which stands the new type of development premises of knowledge-based society.

The exponential growth of mobile communications and the number of Internet users, the contribution of ICT to economic growth and jobs creation, restructuring of companies and business in general to benefit more efficient of new technologies, accelerated development of electronic commerce and in the essence of the digital

economy—supporting the transition to a knowledge society. It offers the most promising prospects for stopping crisis effects and the overcome of the social exclusion, but requires that the social protection systems to become more active, to provide incentives for work, to ensure sustainable pension systems for the elderly population and a stable environment in which the transition to knowledge economy can be performed.

The economic crisis and Europe's sustainable recovery can be supported by using the potential of the digital economy, especially, and that is a continent which has a generation of young, good professionals in digital technologies, which is a powerful incentive to develop and market innovation. This "resource" may be a powerful incentive to develop market towards development and innovation.

Trends in the Digital Economy

The digital economy puts in first place the needs of consumers, and the needs of consumers have an interactive character, participatory, realizing the interface between offer and demand on an area of volume and structure, in space and time more rigorously. The new economy is providing after the principle of "the more people involved, the bigger benefit for everyone involved". It is expected that by 2016, digital economy will double, increasing from 2,300 billion in 2010, to 4,200 billion dollars in 2016 (UNCTAD, 2012).

Boston Consulting Group (BCG) is estimated that in 2016 there will be three billion Internet users' worldwide, which means 45% of world population, and the value of digital industry of G20 countries will double by 2016 and by 2013 will be more mobile broadband connections then fixed connections. The technology will lead the increase from 2.3 trillion to 4.2 trillion dollars and result in the spread of mobile Internet.

By 2016, China will have 800 million Internet users, as France, Germany, India, Japan, England, and U.S. together and China's Internet economy will be developed at the level of the U.S., in addition, medium and small companies which are significantly present and the Internet is expected to grow with 5% faster than the companies which are not. In the next five years, the Internet will occupy a key role in the growth of the digital economy in the countries that are a G20's member; an billion opportunity decently remains unexploited (GT Briefing, 2013).

According to the estimates suggested in the report "The Digital Economy" by the 2016, the economy of the digital universe will reach 4,200 billion dollars. Active Internet population will increase from 1.9 billion in 2016 that means almost 45% of the entire population of the globe. Emerging popularity of mobile devices and the important social role that media plays in the entire economic environment will lead to changes in the approach of the Internet by the companies which will take advantage of the new business opportunities by no doubt. According to data from the report, access to the Internet through mobile device, especially smart phones will grow until 2016, reaching about 80% of the number of broadband connection. Quick drop in cost for smart phones with cheap versions reaching, approximately 80% of the Internet users will access the virtual space by using a cell phone.

According to government data, Romania is ready to step up to fully exploit the advantages of the digital economy by providing faster broadband and Internet services in the public trust by improving citizens' skills and encouraging further innovation in information technology and communications (IT&C).

Google has ordered a study on the evolution of digital economy, and according to it provided that in four years three billion people will use the Internet, approximately 50% of the population.

Research suggests that Britain is one of the most advanced economies in the digital world. In 2012, the

digital economy of the G20 group of countries was 2.3 trillion, larger than the economies of Italy or Brazil, but only 4.1% of the total savings from the G20 countries.

In the following period, approximately 80% of Internet users will access the virtual space of the mobile Internet which will become a social one, allowing customers and businesses to communicate with each other. This trend will be coupled with another huge technological trend that will fundamentally change how business is done, the development is of so-called “Internet of Things”, where all sorts of devices, from sensors to the car and the radiator will be connected to the Internet.

The giant technology IBM estimates that by 2015, a trillion devices will be connected to the Internet. Virtual space will reach and into the real space, so companies must adapt their employees, processes, and structures for the digital economy. BCG believes that entrepreneurs who are building their digital business will overtake their rivals in the coming digital economy.

Based on the strategy adopted in the period 2010-2020, the European Commission at the end of December 2012 adopted a “Digital Agenda” which was added some new priorities for the economy and digital society (Kroes, 2011). Although digital economy registered a growth rate seven times higher than the rest of the economy, this advance is diminished by the existence of a division of the Pan-European policies. European Commission Vice-President Neelie Kroes, believes that “2013 will be the busiest year for the digital agenda. The main priorities are increasing investment in broadband and maximize of contributions digital sector to the recovery of Europe”.

Full implementation of actions under the Digital Agenda levels (increasing investment in ICT, improving labor skills, facilitating innovation in public sector, reform framework conditions for Internet-based economy), will increase European GDP with 5% or 1,500 EUR per person in the next eight years and achieve the digital single market by 2015 (Kroes, 2011).

If certain actions are not taken at the pan-European level, there is a risk that approximately one million jobs will remain unfilled in the digital domain until 2015, and by creating infrastructure 1.2 million jobs will be created, which would result in an increase up to 3.8 million jobs, throughout the economy on the long term.

The main priorities which are outlined for the next period, 2013-2014, can be summarized as follows:

- Creation of a new regulatory framework stable in broadband services needs more private investment in broadband networks, fixed and mobile high speed;
- Creating a digital infrastructure for public services will accelerate the expansion of digital services for cross-border interoperability;
- Formation and launch of the “great coalition to promote competence”, which will aim to increase the number of training sessions on information technology, the realization of direct connections between education and the business environment, adopt professional profiles and promote certification standard skills to support job mobility;
- Ensuring cyber security at EU level which will providing the most online secure environments in the world, with due freedom and privacy of users;
- Updating European copyright framework, revising and modernizing the EU legal framework will be full realized by 2014;
- Stimulation system “cloud computing” is based on the purchasing power of the public sector and creating the largest ICT market of kind globally, by dissolution narrow national frameworks and current negative perceptions of consumers;

- Launching of a new industrial strategy in the electronics industry, to propose a strategy for micro- and nano-electronics, to increase the attractiveness of Europe for investment in design and production and to achieve a larger market share globally.

Although online shopping rate increased, the growth of cross-border e-commerce is too slow. Also, broadband high-speed, services increased during this period, there are still major differences between Member States, leading to the need to adopt active measures in the European policy to minimize and eliminate the differences.

Conclusions

Digital economy requires increased knowledge in new products and services, increasing the importance of learning and innovation, globalization and sustainable development. Enormous amounts of information change the functioning of markets, making possible the restructuring of enterprises and the emergence of new opportunities for creating value from information available. The digital economy is a state of the economy, and the information obtained in many ways is stored in databases and its complex use is made of the premises or placed in public positions and corresponding activities and transactions by individuals and organizations.

The digital economy raises on a new plan the information, focusing on ensuring transparency of processes, substantiating the decisions, it is the economy of strictness, fairness, and completeness in terms of updating databases.

The digital economy is the increasing use of information technology (hardware, software, applications, and telecommunications) in all aspects of the economy, including internal operations of organizations (business, government, and non-profit), transactions between businesses and individuals, acting both as producers and consumers.

IT enables the collection and processing large volumes of information, stimulate innovation, which gives organizations greater opportunity and incentive to increase quality and efficiency. In this way, we can say that IT is the main engine of the global economy. The digital economy has produced enormous benefits, the most significant is that both developed countries and developing ones should ensure appropriate policies and programs to implement the digital transformation. To be successful in today’s economy, the people need knowledge and understanding of computer and Web skills. IT has increased considerably the ability to develop new business models, products and services, processes and fundamental inventions.

Defining clear procedures for verification of how the operators made additions to the database is essential to ensure all further processing. In the new economy we are witnessing important changes on the work, the focus will be increasingly more creatively thinking and the products created are such intangible—information and knowledge.

The new laws, rules, standards, and regulations developed—with the support and business opinion and civil society—have stimulated the development of some new information society services (commerce and electronic transactions, computerization of public services, citizen access and economic agents to public information, etc.), and also ensure ethical rules to work and live in a new company (protection of privacy and personal data, confidential transactions, consumer protection, etc.). In turn, the business community technologies must provide information and communications products and services of high technological level and also more affordable prices and rates. Also, ways must be found to form a new culture of competitiveness of undertakings in all sectors in the new economy—digital economy.

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Organizational Form and Expense-Preference Behavior: Evidence From Islamic Banks

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This paper examines the organizational forms of Islamic banks, corporate governance mechanism, and their effects on organizational behavior, specifically related to managerial expense preferences. The paper opted for an ordinary least square (OLS) cluster regression and followed by a stochastic frontier approach test as a robustness test. Findings of this study indicate that organizational forms of Islamic banks influence managerial expense preferences. A stochastic frontier approach test supports the initial findings and reveals that the average noninterest cost inefficiency of Islamic banks without Shari'ah Boards is 23% compared to commercial banks. Islamic banks with Shari'ah Boards are, on average, 28% less noninterest cost inefficient compared to Islamic banks without Shari'ah Boards, and are on average, 16% less noninterest cost inefficient compared to commercial banks. Shari'ah Supervisory Boards' positive implications for Islamic banks are independent of the expectations of the governing structure or ownership. Specifically when looking at Islamic banks with Shari'ah Supervisory Boards, managerial propensity to engage in self-serving behavior is reduced. This paper fulfils an identified need to understand how the distinct nature of Islamic banks organizational forms and governance impact managerial behaviour.

Keywords: Islamic banks, organizational form, non-interest expense, efficiency, Shari'ah Supervisory Boards, religious beliefs, knowledge

Introduction

Both the traditional theory of the firm and neoclassical microeconomic theory assume that managerial behavior and goals are primarily driven by an output that maximize profits in the short or long run. This assumption developed by Williamson (1963) and modified by Rees (1974), offers a different opinion regarding managerial behavior (agency costs and transaction costs). Maximizing shareholders' value is an exclusive objective of a well-managed company that is driven by an environment in which a firm's owners are not its managers, markets are inefficient and less competitive, and a high degree of regulatory structure exists (Friedman, 1990). However, prior studies (Leibenstein, 1966; Leibenstein, 1975; Williamson, 1963) provide a contrary view of ownership structure (hereinafter, organizational form) and demonstrate the tendency for managers to pursue policies that do not maximize profits (that is, expense-preference behavior) (Rhodes, 1999). This expense-preference theory suggests that managers will act contrary to the best interest of their firms by pursuing utility-maximization policies that favor excessive allocation of resources to salaries, larger staffs, unnecessary benefits, more privileges, and costlier office settings. Rhodes (1999) defined expense-preference

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behavior as the means by which managers approve expenditures that augment their personal power, prestige, recognition, and wealth maximization. Adam Smith (1937) declared the management of early joint stock companies as slack in many of their activities due to the separation of ownership from control. Additionally, transaction cost economics and agency theory suggest that the absence of formal monitoring mechanisms adversely influence managers' behaviors.

The central question this study attempts to investigate is threefold. First, does the distinct organizational nature of Islamic banks encourage expense-preference behavior? Second, are there any implications of expense-preference behavior for one or more inputs in Islamic banks using the Investment Account Holders (IAH) and the Unrestricted Investment Account Holders (UIAH) techniques? Third, does the integration of the Shari'ah Supervisory Boards (SSBs) shape management's behavior and limit the agency and transaction costs specifically relating to expense-preference behavior? This new perspective of comparing identical stock-form organizations such as IBs and commercial banks provides an opportunity to determine whether the pattern of the spending behavior in institutions with identical organizational forms is consistent across different business segments.

This paper contributes to the literature on IBs, their organizational forms, and their management behavior on expense preference and noninterest cost inefficiency. Recent work by Čihák and Hesse (2008), Haron and Ahmad (2000), and Srairi (2009) provides contradictory evidence with regard to IBs' expense preference and inefficiency. Their work simply focuses on evaluating noninterest expense and inefficiency in IBs versus commercial banks. In contrast, this paper takes a step back and examines the economic rationale associated with IBs' organizational forms and their impact on organizational behavior, thus enabling a more insightful examination of managerial behavior and policies that can result in expense-preference behavior and noninterest cost inefficiency.

The remainder of the paper proceeds as follows. Section two presents a brief review of the relevant literature. Section three provides a research design and methodology. Section four presents the concluding remarks.

Literature Review

Organizational Form (Stock-Form versus Mutual-Form)

The primary difference between stock-form and mutual-form banks is who controls the bank and receives the profits. In stock-form banks, stakeholders elect managers, distribute profits, and can sell their privileges. In a mutual-form bank, depositors are the owners but not the managers of the organization. They lack of the legal right to elect or vote out managers. Instead, a self-perpetuating or elected board of trustees controls the firm. Although the trustees have control over the bank, their control is not absolute. When trustees deliberately impair depositors' interests, for example, depositors might resort to legal action for protection. However, withdrawing their funds is often the only way to object. In other words, depositors generally cannot significantly influence the bank's decisions or policies, which makes it highly unlikely that managers in mutual-form banks will maximize profits and provide depositors with higher returns (Nichols & Kiel, 2004).

Organizational Form and Efficiency

Mester (1989)[1] and Stansell and Hollas (1990) argued that earlier studies implement inappropriate estimation techniques when providing evidence of expense-preference behavior among U.S. banks and saving

[1] Mester (1989) assumed that expense-preference behavior does not apply to all firms and concentrated her test on the suspected individuals who demonstrate expense-preference behavior (mutual savings and loans).

and loans. The problem is the input demand functions, which are expenditure-share equations for the inputs as well as indicator variables that specify whether a firm exhibits expense-preference behavior. A positive, significant coefficient of the indicator variable indicates that the expense-preference behavior is prevalent and documented.

Mester (1989) argued that the intercept test (the indicator variable method) involves two very restrictive rules to enable the coefficient of the indicator variable to effectively capture expense-preference behavior effects. First, the intercept test requires that all firms share the same production technology within the same industry. If not, then the coefficient of the indicator variable captures differences on the production technologies among firms instead of capturing differences in the expense-preference behavior.

Organizational Form Efficiency and Stability

There are two components of economic or productive efficiency (Farrel, 1957). First is the firm's ability to produce as much output as a given input would permit, or the firm's ability to use as little input as possible, relative to output. Thus, the focus is on technical efficiency or waste avoidance; it essentially augments the orientation of output. The second component is the price element, which is the amount of output a firm must produce with minimum input expense. Therefore, selecting the least expensive combination of inputs to produce technically efficient output is the way to achieve efficient resource allocation (Lovell & Tatje, 1999).

To examine the efficiency of IBs in comparison with commercial banks, Hasan and Bashir (2003) used overhead to total assets to detect the variations in operational costs throughout the banking system. In addition, they correlate negatively to the loan ratio, which indicates a strong positive correlation between profitability and overhead. Furthermore, a larger equity-to-total-asset ratio leads to higher profit margins, and a higher overhead ratio negatively influences the performance of the bank, and vice-versa.

Research Design and Methodology

Research Question and Hypothesis

The central questions in this investigation are: (1) Does the distinct nature of Islamic banks encourage expense-preference behavior? (2) Are there any implications of expense-preference behavior for Islamic banks using the IAH and the UIAH techniques? and (3) Does the integration of the SSBs shape management's behavior to limit the agency and transaction costs specifically relating to expense-preference behavior?

Unethical behavior declines when managers own a larger fraction of a firm's equity. Despite this, the absence of direct control and monitoring suggests a moral nature that is not readily reconciled with moral business conduct or the teachings of Shari'ah. In other words, IBs are similar to mutual-form banks. An important distinction is the legal status of depositors in both organizations. In IBs, depositors are deemed as shareholders, but they do not receive any voting privileges or board representation. This increases managements' power and decreases the threat of concentrated ownership, which in turn encourages managers to misappropriate organizational resources and results in prevalent expense-preference behavior. This leads to the first hypothesis:

HA1: Managers of Islamic banks that do not integrate Shari'ah Supervisory Boards within their governance structure are less efficient and do exhibit greater expense-preference behavior agency costs than managers of Islamic banks that embed Shari'ah Supervisory Boards and managers of commercial banks, ceteris paribus.

Agency theory recommends tight and direct control over managers' behavior. The controlling function is of importance because it reduces the agency problem, and more specifically, the agency cost and transaction costs. However, diversified entrepreneurs who placate their spiritual consciences by investing in IBs but fail to oversee, control, or monitor managers' activities actually increase managerial inefficiency and decrease the efficient utilization of resources. Nevertheless, if the IBs integrate the SSBs, managerial inefficiency decreases due to the overseeing, controlling, or monitoring of managers' activities. Accordingly, the second hypothesis is:

HA2: Managers of Islamic banks that are owned by multifaceted entrepreneurs and that do not integrate Shari'ah Supervisory Board are less efficient and have higher agency costs specifically related to expense-preference behavior as compared to Islamic banks that embed Shari'ah Supervisory Board, ceteris paribus.

Stronger government controls should therefore offset this moral hazard. In addition, governments can implement more risk-management regulation. However, this involves a commitment to huge reforms, which are generally costly and time-consuming. Generally, governments are preoccupied with other political agendas, thus leading to the third hypothesis:

HA3: Management decisions in quasi-government Islamic banks do not integrate Shari'ah Supervisory Board which are less efficient and coincide with occurrences of agency problems specifically related to expense-preference behavior as compared to managers of Islamic banks that embed the Shari'ah Supervisory Board in their governance structure, ceteris paribus.

The profit-sharing concept, especially in mudarabah accounts, is sensitive because the expense-preference behavior does not prevail in the relationship between IBs and IAH depositors. Mudarabah accounts rely on profit sharing, but they can also lose money. In order to incentivize the IAH to keep its invested funds with IBs, managers may opt to return the initial amounts invested in the IAH without charging the losses to the IAH. Alternatively, managers may decide (after BoDs' approval) to share losses with the owners and shareholders in order to encourage depositors and the UIAH to maintain their deposits and investments with IBs. This leads to the fourth hypothesis:

HA4: Managers of Islamic banks that do not embed Shari'ah Supervisory Boards and maintain investment account holders and unrestricted investment account holders under the mudarabah concept exhibit more agency costs precisely relating to expense-preference behavior in comparison with the managers of Islamic banks that integrate Shari'ah Supervisory Boards, ceteris paribus.

Data and Sample Construction

Information on all available Islamic banks and commercial banks in the BankScope database was retrieved between 1993 and 2010. To make a fair comparison, a balanced panel sample is constructed and banks that did not have full 18-year (1993 to 2010) bank information was excluded. In addition, new Islamic banks that were established and incorporated after 1993 were excluded from the sample. The sample includes Islamic banks in 15 countries: Bahrain, Bangladesh, Egypt, Indonesia, Iran, Jordan, Kuwait, Lebanon, Malaysia, Pakistan, Qatar, Saudi Arabia, Sudan, Turkey, and United Arab Emirates. The sample includes 82 IBs and 82 commercial banks, consisting of 2,950 bank-year observations. Information on mudarabah accounts and institutional owners of IBs is manually collected.

Variables and Methodology

Table 1 depicts, noninterest expense (NIExp) is a proxy for expense-preference behavior. To obtain

noninterest expense, the noninterest expense ratio is employed and is determined by first adding all noninterest expense, such as salaries, wages, offices, and other related expenses, and then obtaining the total noninterest expense to the total assets by lagged assets in the sample (Srinivasan & Wall, 1992; Johnson, 1993). IB is a dummy variable that equals 1 if the bank is an IB; it equals 0 otherwise. M_Entre is a dummy variable that equals 1 if the shareholders are diversified; it equals 0 otherwise. S_Owned is a dummy variable that equals 1 if the IB is a quasi-government bank; it equals 0 otherwise. Mudarabah is a dummy variable that equals 1 if the IB offers a mudarabah account; it equals 0 otherwise.

Table 1

Correlation Matrix

	a.	b.	c.	d.	e.	f.	g.
a. NIExp	1.0000						
b. M_Entre	0.5870	1.0000					
c. S_Owned	0.1240	-0.0280	1.0000				
d. Mudarabah	0.2440	0.1020	0.0940	1.0000			
e. M. East	0.3110	0.0960	-0.0220	0.0170	1.0000		
f. Asset (Log)	-0.2270	-0.0020	0.0190	0.0160	-0.0940	1.0000	
g. EIUCR	-0.2130	-0.0860	0.1790	-0.0190	-0.4670	0.1350	1.0000

Note. This table reports correlations of firm-level variables, and country characteristics.

To separate the IBs and the conventional banks, it is important to control for other factors that determine bank efficiency. Two-set control variables help in isolating the effects that influence bank performance: macroeconomic variables and financial-structure indicators. Both include inflation and GDP per capita growth (as a control for country heterogeneity) as proxies for economic development and stability, respectively (Berger, 1993; Kosak & Zorik, 2010). A region dummy variable (Middle East) is included as a control variable to account for differences between countries (Grigorian & Manole, 2002).

In addition, the European Intelligence Unit (EIU) country and banking sector risks are used as proxies for changes in economic developments that are likely to affect the quality of a bank's creditworthiness, as well as political and business-trend developments. Both are important proxies for the quality of regulation and legal environment. In addition, bank size is used to test for external validity and for the purposes of control. It is measured as the log of total assets. Year dummies are included to control for time fixed effects.

The panel data used in the study is from BankScope. Hypothesis 1 is tested using 82 IBs, 82 commercial banks, and 2,950 bank-year observations. The rest of the hypotheses are tested using a sample of 34 IBs and 1,474 IB-year observations. Linear regression models require: linear relationships between dependent and explanatory variables; no serial correlation independence of the errors; constant variance (homoskedasticity) of errors; that time and any explanatory variables not be included; and normal error distribution. Pooled OLS requires the errors in each time period to be uncorrelated with the explanatory variables in the same time period in order for the estimator to be consistent and unbiased (Wooldridge, 2002). Correcting for heteroskedasticity, robust variance estimates were obtained.

Year dummies control for time fixed effects, which exploit within-group variation over time. In addition, country dummies are included to control for the average differences across countries for any observable or unobservable predictors that enhance the reliability of the coefficient estimates (Wooldridge, 2002). Control is

used for country heterogeneity, by GDP growth and inflation as proxies for economic development and stability, respectively (Berger & Mester, 1997; Kosak & Zorik, 2010).

Robustness Test

Some issues may jeopardize the OLS cluster robust standard error estimation and cause it to misrepresent the effects of organizational form and management behavior on noninterest expense (expense-preference behavior). One issue could be omitted-variable bias, though, as stated earlier, the necessary econometrics techniques were implemented to ensure unbiased estimates. In addition, heteroskedasticity is corrected by obtaining robust variance estimates. Other factors could encourage managers to misappropriate resources, such as socioeconomic factors.

The bank-specific estimates of X-inefficiency, μi, are obtained by using the distribution of the X-inefficiency term conditional on the estimate of the entire composite error term, as proposed by Jondrow, Knox Lovell, Materov, and Schmidt (1982). Using a translog functional form, the (noninterest) cost inefficiency model is as follows:

$$\ln\left(\frac{C}{z*w2}\right)= \alpha_0 + \alpha_1 \ln(w_1/w_2) + \frac{1}{2}\alpha_2 \ln(w_1/w_2)\ln(w_1/w_2) + \sum_{k=1}^{3}\beta_k \ln(y_k)$$
$$+\frac{1}{2}\sum_{k=1}^{3} 1 \sum_{k*=1}^{3}\beta_{kk}*\ln(y_k)\ln(y_{k^*}) + \frac{1}{2}\sum_{k=1}^{3}\gamma_k \ln(\gamma_k)\ln(w_1/w_2)$$
$$+\frac{1}{2}\sum_{k=1}^{3} 1\,\delta_{kl}\ln(\gamma_k)\ln(z_1) + \frac{1}{2}\ln(w_1/w_2)\ln(z_1) + \mathrm{year\_Dummies}$$
$$+\ \mathrm{region\_dum\,my} + \mathrm{GDP\_growth} + v + \mu$$

According to Berger (1993), Esho (2001), Humphrey (1992), and Peristiani (1997), there are two different approaches to measuring banks' flows of services. In this study, the intermediation technique is used to specify the input prices and outputs. The input prices equal: (1) the price of borrowed funds (w_1 = interest expense divided by total borrowed funds); and (2) the price of labor (w_2 = personnel expense divided by full-time equivalent workers). The three outputs are total loans (y_1), liquid assets (y_2), and other earning assets (y_3). Total equity (z_1) is used as a fixed input in the estimation to account for banks' endogenous choices of risk. In the estimation, the equation is normalized by one input price (w_2) to impose linear homogeneity (Kuenzle, 2005).

Finally, v represents the random noise, which incorporates both measurement error and luck, and μ is the inefficiency term that increases bank costs and is assumed to have a half-normal distribution with positive value. The second measure is to use the personnel expense as a proxy for expense-preference behavior. Total assets normalize the measure, and then the regression output of the initial regression-estimation technique and the stochastic frontier techniques are compared with the personnel-expense dependent-variable outcome.

OLS Cluster Robust Estimation

Table 2, Model 1 (first column) evaluates the effect of IBs and commercial banks on noninterest expense (expense preference). The dependent variable is noninterest expense. Hypothesis 1 predicts that the distinct nature of IBs that does not embed the SSBs make them exhibit more expense preference than IBs that integrate the Shari'ah Boards and commercial banks.

Table 2

Islamic Banks vs. Commercial Banks (Panels 1, 2, 3, and 4)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Islamic (Dummy)	0.035***	0.034***	0.034***	0.033***			
	(65.96)	(68.55)	(66.02)	(67.56)			
SSB			-0.018***	-0.017***		-0.016***	-0.010***
			(-24.20)	(-21.01)		(-12.28)	(-7.31)
Multi_Entre					0.045***	0.046***	0.017***
					(32.72)	(34.49)	(16.35)
A Semi_State					0.018***	0.014***	0.014***
					(19.24)	(17.10)	(18.21)
Mudarabah					0.022***	0.022***	0.015***
					(28.70)	(28.85)	(20.24)
Multi_Entre* Mudarabah							0.025***
							(4.18)
Assets (Log)		-0.001***		-0.008***		-0.003***	-0.001***
		(-12.36)		(-11.20)		(-13.88)	(-12.79)
Year and Country		Yes		Yes		Yes	Yes
_cons	0.018***	0.019***	0.035***	0.038***	0.031***	0.047***	0.041***
	(83.45)	(15.20)	(47.31)	(25.25)	(20.89)	(24.20)	(19.47)
N	2,950	2,950	2,950	2,950	2,950	2,950	1,474
R^2	0.396	0.418	0.446	0.459	0.470	0.487	0.498
adj. R^2	0.396	0.415	0.445	0.456	0.465	0.479	0.485

Note. * $p < 0.05$; ** $p < 0.01$; and *** $p < 0.001$.

Results from the Models 1 and 2 confirm Hypothesis 1: IBs tend to exhibit more expense-preference behavior than commercial banks. The result consistent with Jensen and Meckling (1976), who find that conflict between shareholders and managers is due to unaligned interests, as well as because managers hold less than 100% of the residual claims, which leads managers to bear the entire cost of profit-enhancement activities without capturing the entire gain from these activities. Hence, managers overindulge in self-serving activities that maximize their wealth rather than maximize firm value. Models 3 and 4 investigate the effects of the embeddedness of the SSBs within the governance structure of IBs. Model 3 examines IBs that embed SSBs without any control variables and Model 4 depicts the same results as Model 3 with control variables. As it can be seen from Models 3 and 4, the coefficients on the SSBs are negative and statistically significant (β = -0.018; $p < 0.001$). The significance holds after controlling for firm level, country level, and year effects. The analysis illustrates that IBs integrating the SSBs have a negative impact on noninterest expense. It is evident that the SSBs affect managements' behaviors due to the additional monitoring, controlling, and advising mechanisms they add.

SSBs' positive implications for IBs are independent of the expectations of the governing structure or ownership. Specifically when looking at IBs with SSBs, managerial propensity to engage in self-serving behavior is reduced.

Hypothesis 2 predicts that managers of IBs that are owned by multifaceted entrepreneurs and do not integrate SSBs are less efficient and have higher agency costs specifically relating to expense-preference behavior as compared to IBs that embed SSBs. Model 5 presents different organizational forms on expense preference without any control variables. The coefficient of Multi_Entre is positive and statistically significant

(β = 0.045; p < 0.001). Model 6 presents the same results as Model 5, including controls for SSBs, year, and country effects. The coefficient on Multi_Entre is positive and statistically significant (β = 0.046; p < 0.001). Thus, Hypothesis 2 is supported.

These results confirm the first paradigm: Diversified investors add IBs to their portfolios in order to fulfill their spiritual commitments without a corresponding commitments to supervise, monitor, or control their bank managers actually increase expense-preference behavior, especially where the banks do not integrate the SSBs.

Hypothesis 3 predicts that management decisions in quasi-government IBs that do not integrate SSBs are less efficient and coincide with occurrences of agency problems specifically related to expense-preference behavior as compared to managers of IBs that embed the SSBs in their governance structure. The coefficient of A Semi_State Owned is statistically significant and positive (β = 0.018; p < 0.001). In the Model 6, the coefficient of A Semi_State is significant and positive (β = 0.014; p < 0.001).

This result supports Zif's (1983) findings that overstaffing quasi-government enterprises inversely affects managerial efficiency and encourages managers to avoid profit-maximizing policies. The coefficient of the A Semi-State Owned dummy variable could imply that quasi-government ownership indicates inefficiencies, either in managing expenses or in low employee productivity as compared to IBs with private ownership structure. This interpretation provides another avenue regarding quasi-government IBs and overstaffing issues. Although it may solve some persistent unemployment issues, overstaffing may hinder future economic development.

Hypothesis 4 predicts that managers of IBs that do not embed SSBs and maintain investment account holders and unrestricted investment account holders under the mudarabah concept exhibit more agency costs precisely as they are related to expense-preference behavior in comparison with managers of IBs that integrate the SSBs. Model 6 depicts a coefficient of mudarabah that is positive and significant (β = 0.022; p < 0.001). The Model 6 is identical to the Model 4 and controls for SSBs, country, and year effects. The coefficient on mudarabah is positive and significant at β = 0.014 and p < 0.001.

Robustness Test

Table 3 depicts the estimated noninterest cost inefficiency scores of 15 countries that cover four regions (Far East, Middle East, Near East, and North Africa) in the banking sectors (Islamic and commercial) from 1993-2010 on the aggregate. The first row of Table 3 depicts overall estimated noninterest cost inefficiency scores between IBs with SSBs and IBs without the SSBs of -27.50%. The second row of Table 3 depicts overall estimated noninterest cost inefficiency scores between IBs with SSBs and commercial banks of -16.10%. However, when comparing the IBs that do not embed the SSBs with commercial banks, the overall noninterest cost inefficiency scores are, on average, 22.40% higher than commercial banks within the same regions. This supports the initial findings that IBs' organizational behavior (managements' behavior) exhibits more expense-preference than commercial banks.

Table 4 depicts results for the noninterest cost inefficiency regression by assuming identical production technology. The results are economically significant and support the initial findings. Furthermore, the regression results investigate the likely association between organizational form under different paradigms and the dependent variable of noninterest cost inefficiency scores by controlling for the integration of the SSBs. The OLS estimation regressions use estimated inefficiency scores assuming the same production technology for Islamic and commercial banks.

Table 3

Cost Inefficiency Between Islamic and Commercial Banks

Islamic banks with SSBs versus Islamic banks without SSBs		
Islamic banks with SSBs	Islamic banks	Diff
0.207	0.464	-0.275
Islamic banks with SSBs versus commercial banks		
Islamic Banks with SSBs	Commercial banks	Diff
0.255	0.416	-0.161
Islamic banks without SSBs versus commercial banks		
Islamic Banks	Commercial banks	Diff
0.514	0.29	0.224

Table 4

Noninterest Cost Inefficiency: Islamic vs. Commercial

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Islamic (Dummy)	0.258***	0.253***	0.186***	0.183***		
	(58.21)	(55.44)	(9.66)	(9.83)		
SSB			-1.146***	-1.147***	-1.312***	-1.270***
				(-3.41)	(-3.47)	(-3.41)
Multi_Entre					0.183***	0.209***
					(25.75)	(10.44)
A Semi_State Owned					0.083***	0.173***
					(7.86)	(7.06)
Mudarabah					0.093***	0.121***
					(5.76)	(5.84)
Multi_Entre* Mudarabah						0.047*
						(2.17)
Semi_State* Mudarabah						0.105***
						(5.36)
Assets (Log)		-0.004***		-0.004***	-0.003**	-0.003***
		(-4.34)		(-4.91)	(-2.79)	(3.33)
EIUCR		-0.0102***		-0.010***	-0.017***	-0.005
		(-5.05)		(-4.64)	(-6.63)	(-1.42)
Middle East		-0.0158***		0.00544	-0.043	-0.011
		(-3.36)		(1.53)	(-7.69)	(-1.09)
Year		Yes		Yes	Yes	Yes
_cons	0.486***	0.540***	0.558***	0.578***	0.601***	0.616***
	(125.56)	(41.49)	(29.23)	(41.21)	(39.03)	(43.75)
N	2,388	2,388	2,388	2,388	2,388	2,388
R^2	0.358	0.390	0.429	0.463	0.473	0.500
adj. R^2		0.386	0.405	0.457	0.466	0.489

Note. * $p < 0.05$; ** $p < 0.01$; and *** $p < 0.001$.

Inefficiencies of IBs with and without integrated SSBs are further investigated; the OLS cluster robust standard error estimation regressions use personnel expense as the dependent variable. Table 4 depicts regression results that investigate the likely association between organizational forms under different paradigms

and noninterest cost inefficiency scores. Higher personnel expense in IBs is consistent with the expense-preference behavior scenario when SSBs are not integrated. Overall, there is a strong and negative association between IBs that embed the SSBs, noninterest cost inefficiency, personnel expense, and employee cost inefficiency, especially when estimates of efficiency scores are corrected for a different production technology, thereby indicating a lower degree of agency and transaction costs (and hence is the expense-preference behavior). However, with IBs that do not integrate the Shari'ah Boards, findings indicate that managers have higher agency and transaction costs as compared to IBs with Shari'ah Boards and commercial banks.

Lower average noninterest cost inefficiency suggests that IBs with Shari'ah Boards do not engage in expense-preference behavior compared to IBs without Shari'ah Boards and commercial banks. The results from the robustness checks support the findings from the first estimation techniques and thus far support all three hypothetical paradigms of ownership structures, the restricted investment account holders, and the unrestricted investment account holders under the mudarabah concept. Despite that, IBs with Shari'ah Boards, on average, have lower noninterest cost inefficiency than those IBs without Shari'ah Boards and commercial banks, thus supporting the initial findings. Table 4 depicts the results of the OLS cluster robust standard error estimation, assesses, and compares the impact of noninterest expense (expense preference) for Islamic and commercial banks. Table 5 presents unstandardized beta coefficients and standard errors in parentheses along with the significance levels of the coefficients. Models 1 and 2 investigate managerial behavior and expense-preference measures (noninterest expense). Model 1 investigates the effects on expense preference without control variables. Model 2 provides the same regression model with control variables. Model 3 investigates IBs' organizational forms and the effects of contractual agreements between IBs and investment accountholders on expense-preference behavior without control variables. Model 4 presents the same regression techniques with control variables. Hypothesis 1 predicts that the distinct nature of IBs that do not embed the SSBs make them exhibit more expense preference than IBs that integrate the Shari'ah Boards and commercial banks. Hypothesis 2 predicts that managers of IBs that are owned by multifaceted entrepreneurs and do not integrate SSBs are less efficient and have higher agency costs specifically relating to expense-preference behavior as compared to IBs that embed SSBs.

Table 5

Islamic Banks vs. Commercial Banks on (EPB) Personnel Expenses (Panels 1, 2, 3, and 4)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Islamic (Dummy)	17.64***	16.14***	24.26***	23.62***		
	(8.22)	(8.23)	(6.02)	(6.04)		
SSB		-12.76**	-14.68**	-13.29***		-13.22***
		(-2.93)	(-3.28)	(-5.65)		(-5.52)
Multi_Entre					38.00***	39.45***
					(3.63)	(3.79)
A Semi_State Owned					84.03***	81.88***
					(7.08)	(6.93)
Mudarabah					14.67***	14.92***
					(6.28)	(6.18)
Multi_Entre* Mudarabah						27.23***
						(4.27)

(Table 5 continued)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Semi_State* Mudarabah						14.93***
						(3.46)
Assets (Log)			-2.54***	-2.64***		-3.681**
			(-6.98)	(-6.87)		(-3.13)
EIUCR			-6.265***	-3.29***		-6.175***
			(-3.35)	(-5.65)		(-3.31)
Middle East			-2.51	-2.57		-19.02***
			(-1.20)	(-1.23)		(-4.33)
Year			Yes	Yes		Yes
_cons	0.0127***	0.0127***	28.78***	30.13***	17.88***	47.57***
	(19.77)	(19.77)	(7.732)	(3.81)	(3.68)	(3.72)
N	2,388	2,388	2,388	2,388	2,388	2,388
R^2	0.033	0.041	0.061	0.071	0.272	0.285
adj. R^2	0.033	0.035	0.053	0.063	0.263	0.275

Note. * $p < 0.05$; ** $p < 0.01$; and *** $p < 0.001$.

Conclusions

An investigation for organizational form and managerial scale efficiencies of both Islamic and commercial banks operating in four different regions and organization forms was performed by employing a parametric approach and using a data set that spans the period 1993-2010. This is the first investigation that focuses on X-efficiency, which determines managerial efficiency or inefficiency from an economic perspective and more precisely relates to agency costs that stem from agency problems.

The components of managerial efficiencies suggest that the source of X-inefficiency in IBs that do not integrate SSBs within their governance structure is minimized (in terms of average per unit production cost) as compared to managers of IBs that embed SSBs and managers of commercial banks that are not operating at optimal scale. In addition, managerial inefficiency is a proxy for agency costs, which is expense-preference behavior. It increases when: (1) the multifaceted owners of IBs without Shari'ah Boards increase; (2) when the banks are quasi-government IBs and do not integrate the SSBs; and (3) when the IB that does not embed the SSBs offers mudarabah investment accounts that do not give shareholders voting rights or board representation and thus exacerbates transaction cost problems.

Managers of IBs without the integrated SSBs are cost inefficient and are more likely to have higher agency and transaction costs resulting from expense-preference behavior than commercial bank managers. However, Shari'ah corporate governance employs rigorous steps in issuing religious rulings for investments and business transactions, and by having the Shari'ah Boards integrated within the governance structure, agency cost, and transaction cost problems become less prevalent. Second, the findings suggest that managers in regulated industries exhibit significant expense-preference behavior rather than profit-maximization behavior when the controlling and monitoring functions of the Shari'ah Boards are nonexistent.

Third, significant social costs, in the form of X-inefficiency, exist in stock-form IBs, especially those that do not integrate the Shari'ah Boards within the governance structure. The results also have at least one important policy implication: Islamic organizations with embedded SSBs can improve a firm's efficiency by reducing managers' overindulgence and self-serving behavior.

This phenomenon validates the empirical findings of Berle and Means (1937) regarding the separation of ownership from control. They state that with such a separation, agency problems in terms of agency costs, transaction costs, and expense-preference behavior become more prevalent due to the fulfillment of the functions and roles of the corporate boards, and most importantly in the case of IBs, are due to the absence of the integrated SSBs within the governance of IBs.

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